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ABSTRACT

Forecasting from an educational planner's viewpoint, this study projects national and New York State revenues and expenditures until 1990. It is also intended to provide methodological guides for educational planners. Projections assume the continuation of long-term cyclical trends. Four basic procedures were used to project economic data: the straight line method, the polynomial method, the multiple correlation of the transformation of the independent variables, and the natural logarithm method. The study includes actual and projected local, state, and federal revenues including income, corporation, sales, gross receipts, custom, property, license, and other taxes. It then turns to actual and projected federal, state, and local expenditures, including those for national defense, education, highways, public welfare, natural resources, interest on the general debt, and other payments. The study presents actual and projected New York State revenues including income, children to an unacceptable level of their potential. And thus this goal can State actual and projected expenditures including those for capital construction, state purposes, local assistance funds, education, social services, and other purposes. A final section assesses the impact of projected revenue and expenditures on New York State's economy with special emphasis on the effect state assistance to education will have on local school governments. (Author/JM)

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FIRST DRAFT

RESEARCH STUDY 11

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THE PROJECTIONS OF UNITED STATES AND NEW YORK STATE REVENUES AND EXPENDITURES

ORLANDO F. FURNO

JAMES M. GAUGHAN

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Public Law 3-380, Section 842 Staff:

Orlando F. Furno
Charles T. Nephew
William J. Fowler, Jr.
James M. Gaughan

State Education Department Staff

Gordon M. Ambach
Thomas D. Sheldon
John W. Polley
Robert E. Lamitie

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CHAPTER 1

CONCEPTS AND METHODOLOGIES OF PROJECTIONS

Chapter 1 of Research Study 11, Projections of Revenue and Expenditures For Education in New York State, deals with the goals and objectives for this study, the nature of projections, the uses of the projections, the sources of economic and demographic data, the concepts and methodologies used in the projections and the assumptions made underlying the projections.

GOALS AND OBJECTIVES

The prime purpose of this study is to project reasonable estimates of revenues and expenditures, particularly for education in the decade ahead and to project reasonable estimates of the State of New York's ability to support these costs for education.

The magnitude of school costs is affected by many factors. Such determiners of school costs are detailed in the sections concerned with school expenditures. Some of these determiners of school costs are easily measured and understood; for example, teachers' salaries, number of teachers, costs for teaching materials, pensions, etc. Others are not. One such factor affecting school costs greatly is the goals and objectives set for public education. Educational expen-

ditures, then, are not only a function of easily measured costs and the goals and objectives set up for public education, but also of the revenue available to support all the public services the State must render. Most of the factors which escalate costs are in the area of management objectives rather than performance objectives. An example should set these statements in proper prospective.

It is relatively easy to mandate that a school district should have 50 professional staff members per 1,000 pupils. It is just as easy to verify whether or not a school district has attained this objective. It is exceedingly difficult, however, to mandate that a school district have a "quality education program" and to specify the number of dollars needed. Few persons would disagree with the goal of achieving quality education. The problem is obtaining a consensus on the definition of quality education. Without a clear-cut definition, it becomes exceedingly difficult to specify how many dollars are needed to fund a quality education program.

What public education will cost depends upon what persons want education to accomplish. A sound, practical educational policy for financing education cannot be achieved unless there is a consensus on what education should accomplish.

No one should minimize how difficult it is to reach consensus on education's goals and objectives. Since man first started to educate his children, he argued about how to do it. In millenia past, Aristotle stated, "All people

do not agree in those things they would have a child learn...." Aristotle went on to declare, "From the present mode of education we cannot determine with certainty to which men incline, whether to instruct a child in what will be useful to him in life, or what tends to virtue, or what is excellent; for all these things have their separate defenders." To which could be added -- and also their separate detractors. Today, no less than then, the debate on what schools should accomplish continues. What knowledge should children be exposed to in order to inspire them to greater wisdom or virtue? What specific skills should children be taught that would immediately be useful to them in coping with life's problems? Even when goals are agreed upon, the question "How should children be taught?" evokes much heat and anger. Everyone will not agree today, any more than in the past, on what schools should do or on how they should do it. Appraising today's educational goals and objectives and charting from this the future course of action schools will take is most difficult.

Most persons consider pupil learning as the central purpose of education. Learning is a most important goal, but it is not the sole goal of education. Sometimes, before children can learn, schools must provide them with food services, dental services, and medical services. Goals and objectives for education are not value free. Schools cannot accomplish in the time framework of one or even several years many of the goals and objectives so often eloquently stated in school brochures. Schools do not have the resources to do

all things instantaneously. In defining education's objectives answers need to be obtained to such questions as: What educational services need do? For whom should these services be performed? Why is each educational activity being performed? What resources should be allocated to each educational activity? Can some educational activities be achieved in other less costly ways? Are there any educational services currently being performed that should be discontinued? Are there some educational services not currently being performed that should be? Answers to these questions are not easily formulated.

To unfold a quality educational program requires an intimate knowledge of the significant changes presently engulfing the world as well as a profound understanding of the agents of change and its processes. In the scheme of life, such changes represent the problems legislators and educators must solve. Education is a social institution. Whether it bodes ill or good depends upon how well it successfully meets these challenges of change. Education will be affected by decisions related to: (1) society's changing values; (2) knowledge explosion; (3) population explosion; (4) struggle for power in the public schools; (5) the chemistry of learning; and (6) the new educational technology.

NATURE OF PROJECTIONS

To forecast or to project is a process in which the concern is for a sequence of numbers -- usually called a dis-

crete time series. Many of the numbers in the time series are known. These are the actual data. The projection problem is estimating or guessing the numbers for future years. The process involves a set of assumptions within which mathematical equations can be utilized. Thus, the projections are intended to be the best estimate of the actual values of the discrete time series. Such projections, if within reasonable error limits, are invaluable for planning purposes.

Sometimes projections are intended to be the best estimate of the values for selected economic and demographic data for future years, assuming no major policy or program changes during the projection period. For example, a great increase or decrease in the birth rates would affect school population forecasts greatly, thus impacting costs for education dramatically. Shifts in population among states could affect pupil enrollments greatly. Shifts in population within a state such as New York from rural to urban areas and from large cities to suburban areas can result in school districts having many empty classrooms and other districts having to embark on large scale school construction programs. Such population shifts also take a toll in human concerns since teaching jobs are phased out in some districts at the same time that jobs in other districts are increased. If a teacher moves out-of-state, longevity, tenure, retirement, and other job benefits are in serious jeopardy not to mention differences in salaries. Even if the move is relatively short distance, but involves changing domiciles, the financial impli-

cations are great. The several methods utilized herein and discussed in later paragraphs in this chapter are all in actual use. Forecasting has been approached in Research Study #11 more from an educational planner's than an economist's viewpoint. The viewpoints of several economists were sought and their suggestions utilized in the forecasts developed. It must be remembered that in predicting the future educators, economists, mathematicians, and planners all operate out of a "black box of uncertainty." Therefore, the projections of revenue and expenditures contained herein represent attempts to forecast the future financial implications of current fiscal and educational decisions and to anticipate the effects of some future decisions.

USES OF THE PROJECTIONS

The projections made for Research Study #11 are basically for the edification of educators at both the local and state levels. The procedures utilized should serve as guides in methodology for educational planners. As with pupil population projections, revenue and expenditure projections for public education should be revised annually in accordance with any new trends, revised or additional data, and new fiscal and educational decisions. The projections should help both educational decision-makers and the general public taxpayers better understand the difficult fiscal choices that must be made. The hope is that fiscal and demographic projec-

tions will be utilized so that sound educational financial planning will result. Sometimes, educational decisions made outside the sphere of influence of educators create educational programs which impact greatly upon the fiscal resources of the state and local districts. For example, the Elementary and Secondary Education Act was one. Federal and State concerns for the education of handicapped children, recent court decisions mandating equality of educational opportunity and equality of tax burdens, and mandates which require educational programs for the improvement of basic skills performance of students unable to cope effectively in the world of work are among the many more.

Multiyear revenue, expenditure, and demographic educational statistical projections are clearly only suggestive of future trends. No projections are without some degree of error. The further into the future projections are made, the greater are the odds that the deviations from the actual values will be larger. All projections of necessity must be based upon a set of assumptions. Those in Research Study #11 are no exception.

THE CONCEPTUAL AND METHODOLOGICAL APPROACH TO PROJECTION

This section describes the conceptual and methodological approach used for the projections herein. These projections are based on an extension of past relationships selected because of their relevance for future educational

planning. The choice of relationships to be extended and the methodology for extending them are based on certain underlying assumptions. Some or these are expressly stated later in this section. Others are implicit in the methodology utilized. The entire effort has been directed toward predicting what the revenue and expenditure variables will really be and not what they would be if only a series of conditions were to actually occur. Of course, the longer range projections to 1990 should prove to be less accurate than the shorter range ones to the early 1980's.

Projection
Assumptions

The projections of revenue and expenditure herein are based on the long run, cyclical trends inherent in a quarter of a century of experience and tend to ignore very short-run cyclical fluctuations. The procedure utilizing Fourier analysis, however, tends to weigh recent trends more heavily than those of the past. Also, expenditure and revenue projections are presented both in current and constant dollars. The decision to represent expenditures and revenues in constant rather than only in current dollars is because constant dollars reflect inflation which does not impact evenly on all components of public expenditures and revenues.

Surely over the course of the next decade the existing revenue structures at both the Federal and New York State level will probably change. To predict what these

changes will be is an impossible task. The authors believe today's society tends toward a slow, evoluntionary rather than a revoluntionary, radical departure from the status quo. Legislators tend to represent their constituents' desires. Thus, the revenue projections reflect existing revenue structures and present statutes with gradual, slow departures from them. Changes in rates and structures at both the national and New York State level are presumed to be small and deliberate. The expectation is that increases in various revenues must come from increases in the growth of the economy; principally productivity increases, rather than in large rate increases. If tax structures are changed, the changes will be presumed to be small and will come about because of the desire to equalize tax burdens.

Expenditure projections were developed using the baseline approach. Again the procedure was not to project what should be spent to cover all justifiable expenditures but what would probably be expended. Taxpayers have a natural bent not to want their taxes increased greatly. Should such occur, they would probably reflect their feelings in the ballot boxes. Public service personnel have a natural inclination to see unmet needs that should be met and, therefore, propose useful programs to meet them. Government officials must weigh both concerns and render decisions. The revenue projections contained herein assume that expenditures will be made at rates more in keeping with long term historical trends rather than at the more rapidly increasing rate exper-

ienced in the past few years.

Given the constraints of time and manpower it was not possible to delve deeply into budgets, statutes, proposed program changes, new programs desired, etc., at either the Federal or New York State levels. Consequently, all possible refinements underlying these projections could not be made. One also has to wonder given the nature of long term projections whether such refinements would produce more accurate, realistic projections.

Other underlying assumptions concerning these projections are that the economy will be free of the immediate and great effects of major wars or worldwide skirmishes, the prices of materials and supplies will not rise as rapidly as they did in recent years but will level off in terms of their long-term historic trend. There will not be great increases in employment in New York State except those necessary to meet necessary workload increases stemming from statutory mandates and court decisions rather than program increases. The Federal Government will try to reduce unemployment to slightly lower levels than presently. No major revisions in State Aid formulas will occur in New York State, especially in the area of education at the New York State level. Federal Aid to education is assumed to increase slightly more than its past quarter century historic trend. Continued technological progress and capital accumulation will support a private growth rate in output per manhour of approximately three percent.

Projection
Methodology

As indicated earlier under the section Goals and Objectives, the principal purpose of this research study was to project revenue and expenditures, particularly for education in New York State. To this end, total United States revenue and expenditures and New York State revenue and expenditures were projected. Projections were made utilizing as criterion values, revenue and expenditures in current dollars, constant dollars, per capita current and per capita constant dollars. The decision was made to make New York State projections through independent projections rather than through disaggregation of national totals. The larger the economic area, the more adequate and reliable the projections are, was kept in mind. Neither time nor staff, however, permitted the accumulation of projective data for New York State from the disaggregation of national totals. As a check on the internal consistency of the economic data projected for New York State, various ratios of New York State to national economic totals were computed. The computed ratios for the projected economic data were compared to actual historic values and differences were noted and evaluated.

Not only were revenue and expenditure measures projected from the individual measures themselves, but also from aggregating the separate, component projections. For example, United States total revenue was obtained from aggregating its component parts of individual income taxes, corporation taxes,

sales and gross receipts taxes, property taxes, license taxes, and other miscellaneous charges and taxes. New York State total revenue was estimated from aggregating the component projections of individual income taxes, general business taxes, consumption and use taxes, transfers, and miscellaneous taxes.

In like fashion expenditures for the United States and for New York State were estimated from aggregating components. United States expenditures were estimated from aggregating the projections for national defense, education, highways, public welfare, natural resources, interest on general debt expenditures, etc. New York State expenditures were estimated from aggregating the projections for state purposes, local purposes, capital construction, education, social services, local governmental assistance, etc. Of most interest in this research study were the estimates of revenue and expenditures for education, particularly for regular elementary and secondary programs.

Four basic procedures were used to project the various economic data. These were: (1) a straight line method; (2) a polynomial method; (3) a multiple correlation of the transformations of the independent variables used method; and (4) a natural logarithm method (exponential in nature). A fifth procedure called Fourier Analyses was utilized involving yearly percentage growth curves. The best curve fit was tested through the sum of least squares and the coefficient of determination methods. It should be noted that the various projections were not computed mechanically. At

various points in the projective process it was necessary that subjective and objective judgment be brought to bear on the various projections. Thus, wherever possible, the assumptions enumerated previously were evaluated for inclusion into the projection equations so that the trend lines, growth rates, etc. would be modified in line with these assumptions.

Straight Line Method. This procedure utilized the zero order Pearson product moment correlation. The equation was the familiar one for a straight line: $Y = a + bX$. The a intercept and b intercept values were computed in accordance with the simple regression formula so widespread in elementary statistics.[1] Tests for nonlinerity of regression were utilized to estimate the significance of the departure of the linear from the curvilinear relationship.

Polynomial Method and/or Multiple Order Correlation Method. The independent variable was transformed through squaring, cubing, etc. Then, the various transformations were combined into a multiple order correlation, step-wise regression.[2] The standard error of estimate was evaluated to determine the coefficient of forecasting efficiency.

Natural Logarithm Method. The criterion (Dependent variable) measure and the independent variable were transformed

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1 See, for example, Henry E. Garrett, Statistics in Psychology and Education, Longmans, Green and Co., New York, May, 1951, page 321.

2 See, for example, Fred N. Kerlinger and Elazar J. Pedhazur, Multiple Regression in Behavioral Research, Holt, Rinehart and Winston, New York, 1973.

into natural logarithms[1] and then correlated. Such a procedure is extremely useful for obtaining constant growth rates in economic measures when the relationship between two measures is curvilinear.

Fourier Analysis. Another statistical procedure that was most useful in projecting economic data was Fourier Analysis, a method utilizing the concept of the cyclical nature of yearly growth. The analysis took the form of both a trignometric function (sine and cosine) and a polynomial equation. In most instances the number of terms did not exceed four and the number of iterations fifty.

Forecasting Model

Any set of observations could be represented by either a time series model or a probability model. Time series models may be expressed by algebraic, transcendental, composite, and regression models.[2] No particular model was used as a framework for projective analyses. Instead, each economic measure projected was adjusted from its historical long-term trend curve of best fit by the assumptions outlined earlier.

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[1] See, for example, Chapter 21, "Special Topics in General Linear Models," Jae-On Kim and Frank J. Kohout, Statistical Package for the Social Sciences (SPSS), McGraw-Hill Book Company, Chicago, 1970.

[2] Robert Goodell Brown, Smoothing, Forecasting, and Prediction of Discrete Time Series, Prentice-Hall, Inc., Englewood Cliffs, New Jersey, 1963. See pages 106-157.

CHAPTER 2

ACTUAL AND PROJECTED REVENUES FOR ALL LOCAL, STATE, FEDERAL GOVERNMENTS

Chapter 2 deals with the projection of revenues for all local, state and federal governments. The particular revenue measures used and the methods utilized are discussed in detail, accompanied by necessary data tables, statistical formulas, and figures (graphs, charts, diagrams, etc.).

ECONOMIC AND DEMOGRAPHIC DATA

This section presents certain economic and demographic data that were useful in making and finalizing revenue projections for the United States and for New York State.

Population Data

Figure 2.1 and Figure 2.2 portray trend data on live births and birth rates in the United States and in New York State. Table 2.1 contains trend data on live births, birth rates, total population from 1960 to 1975, and projected data from 1976 to 1990 for the United States and for New York State.

Live births in both the United States and New York State bottomed out in about 1973-74. Live births in the United States, however, are expected to increase greatly until a peak of 4,176,000 is reached in 1985 from which point the trend

TREND DATA ON POPULATION, LIVE BIRTHS, AND BIRTH RATES, FOR UNITED STATES AND NEW YORK STATE

AS OF JULY 1	UNITED STATES			NEW YORK STATE		
	POPULATION	LIVE BIRTHS	BIRTH RATES	POPULATION	LIVE BIRTHS	BIRTH RATES
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1960	179,992	4,350	23.9	16,842	359	21.3
1961	183,057	4,259	23.0	16,961	362	21.4
1962	185,822	4,185	22.3	17,186	354	20.6
1963	188,658	4,119	21.6	17,437	356	20.4
1964	191,372	3,940	20.4	17,635	351	19.9
1965	193,815	3,716	19.0	17,795	336	18.9
1966	195,857	3,608	18.2	17,927	321	17.9
1967	197,863	3,520	17.6	18,013	308	17.1
1968	199,861	3,567	17.7	18,109	302	16.7
1969	201,921	3,652	17.9	18,164	310	17.1
1970	204,878	3,709	18.0	18,241	317	17.3
1971	207,053	3,408	16.4	18,242	284	15.4
1972	208,846	3,191	15.2	18,243	253	13.7
1973	210,410	3,112	14.7	18,244	239	12.9
1974	211,909	3,178	14.9	18,246	239	13.0
1975	213,450	3,285	15.3	18,247	236	12.8
			PROJECTED			
1976	215,074	3,425	15.9	18,267	247	13.0
1977	216,814	3,575	16.4	18,288	260	13.7
1978	218,678	3,720	16.9	18,308	273	14.0
1979	220,663	3,865	17.4	18,329	286	14.5
1980	222,769	3,978	17.8	18,350	290	14.8
1981	224,963	4,049	17.9	18,406	296	14.9
1982	227,207	4,104	18.0	18,482	300	15.0
1983	229,484	4,144	18.0	18,518	306	15.1
1984	231,776	4,167	17.9	18,574	312	15.2
1985	234,068	4,176	17.8	18,631	313	15.0
1986	236,345	4,172	17.6	18,700	314	15.0
1987	238,596	4,157	17.3	18,769	313	14.9
1988	240,809	4,132	17.1	18,889	311	14.7
1989	242,673	4,095	16.8	18,908	308	14.5
1990	245,075	4,050	16.5	18,977	305	14.4

NOTE: Population and live births are in thousands. See end of chapter for data sources.

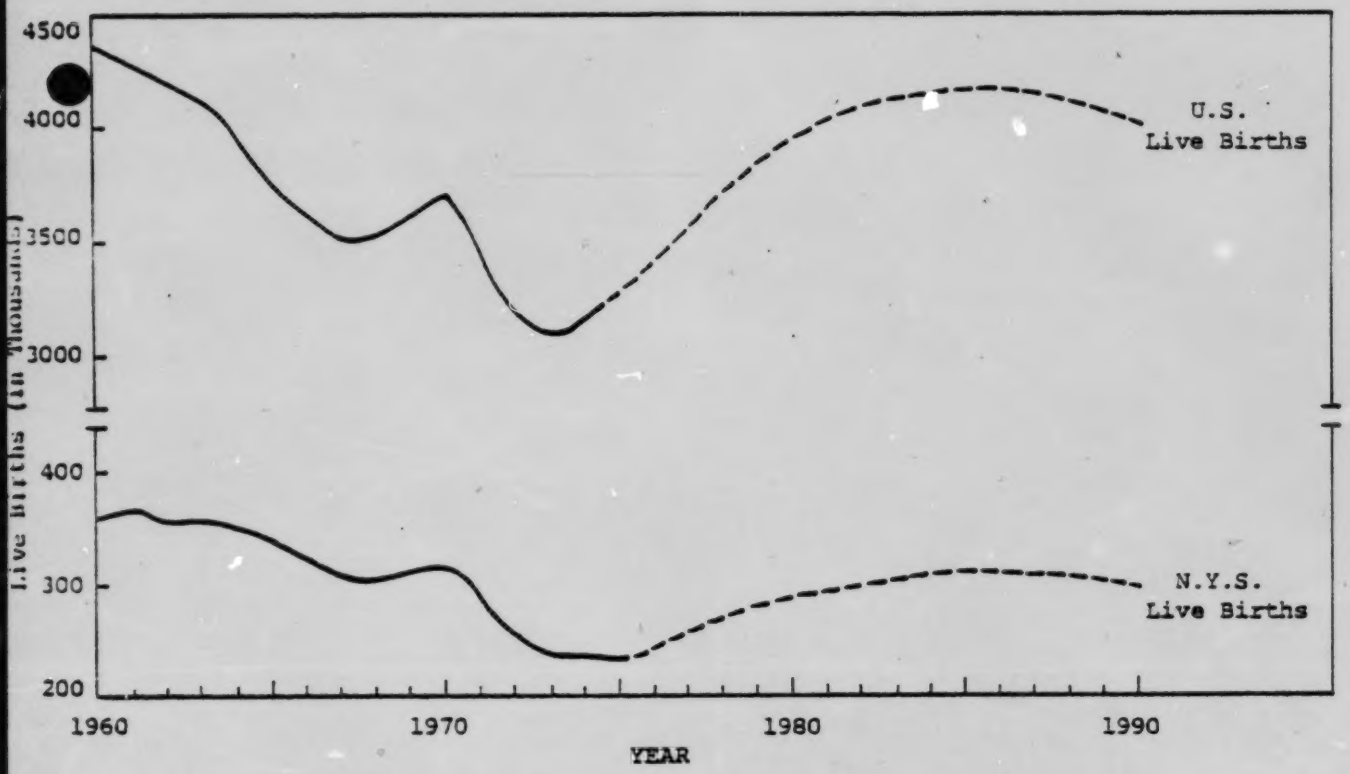

Figure 2.1. Trend Data on Live Births in United States and New York State From 1960 to 1990.

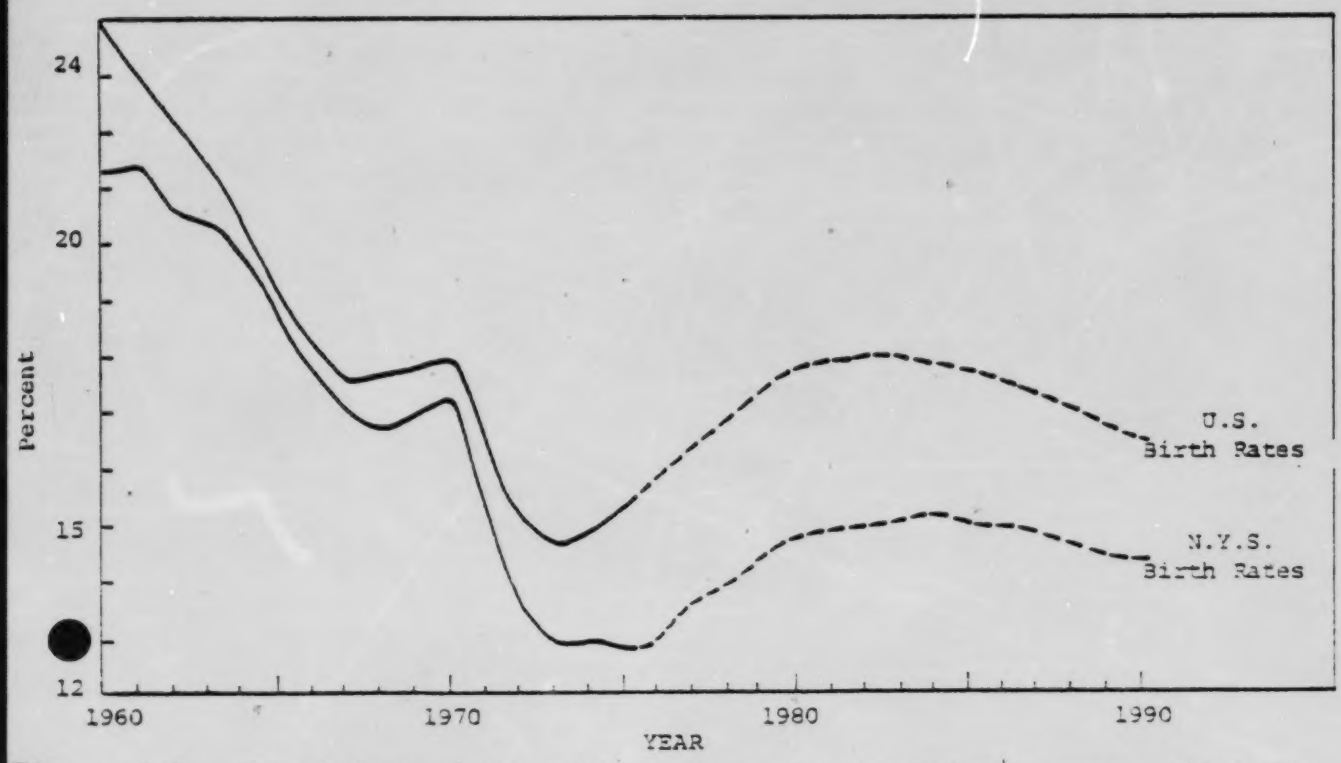

Figure 2.2. Trend data on Live Birth Rates in the United States and in New York State From 1960 to 1990.

is downward, reaching 4,050,000 in 1990. Live births in New York State are projected to increase until a peak of 314,000 is reached in 1986. The subsequent trend is downward, reaching 305,000 in 1990. Both trend curves for the United States and New York State are similar with respect to birth rates except that the rates for New York State are consistently about 3.0 units lower than those for the United States. Little change in mortality rates is projected for overall life expectancies. New York State population projections were based on a net out-migration rate of about two percent.

In accordance with Series II[1], United State population is projected to increase from 204,875,000 in 1970 to 222,769,000 in 1980, an 8.7 percentage increase. A total of 245,075,000 is projected for 1990. New York State population[2] was 18,241,000 in 1970 and increased to 19,604,000 in 1980, a 7.4 percent increase. The total population in New York State is projected to be 21,248,000 in 1990. Population data are depicted in Figure 2.3 and Figure 2.4.

The working age population projects to increase slightly when percent changes in the nation's and New York State's age pyramid are considered. The increase in the 20-34 age bracket will be notably significant. The financial,

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1 The assumptions on which Series II population projections were made can be found in Current Population Reports, Series P-25, No. 493, United States Bureau of the Census.

2 New York State Office of Planning Services, Demographic Projections: New York State Summary, Albany, New York, 1972.

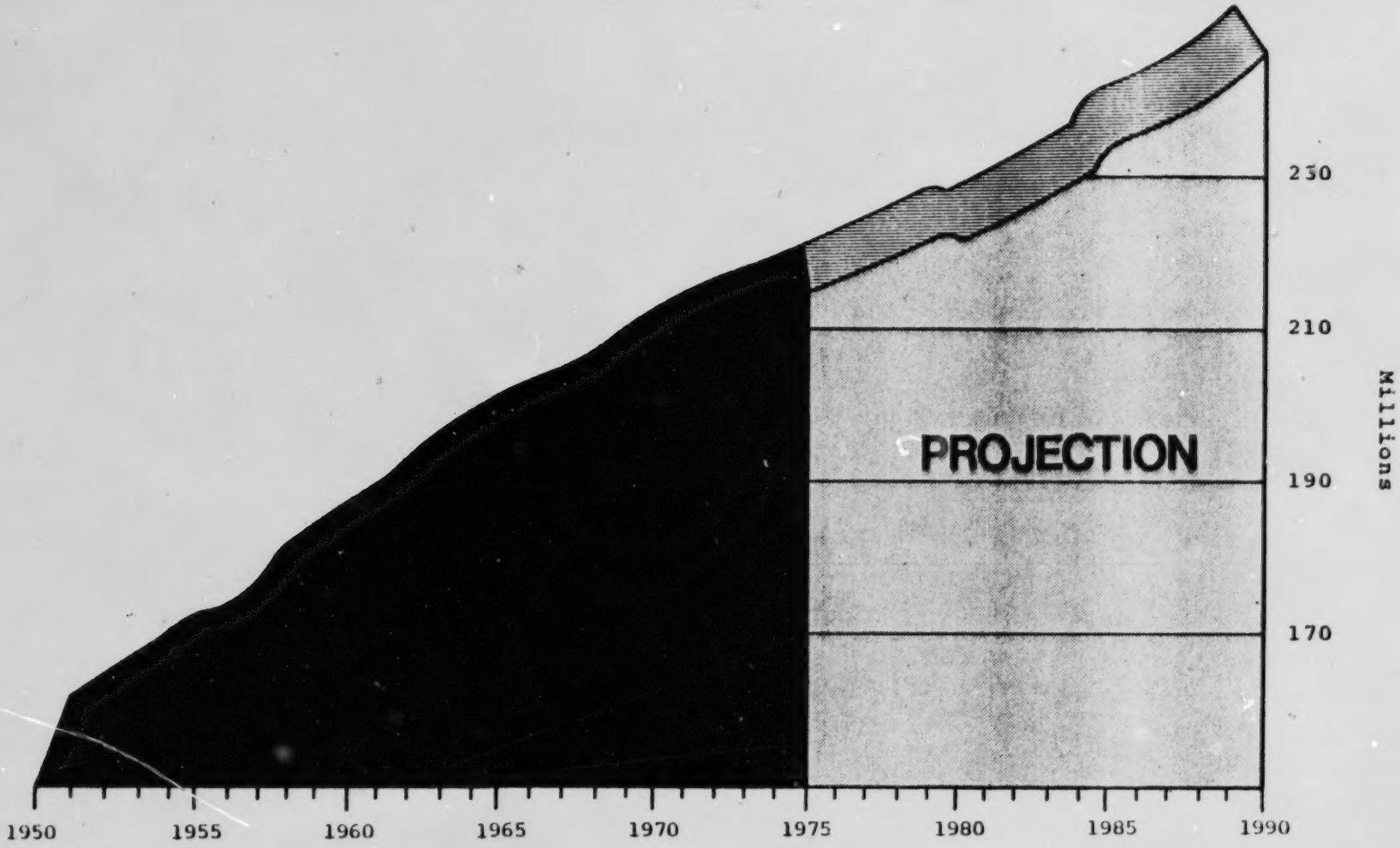

Figure 2.3. Trend Data on United States Population, 1950-1990.

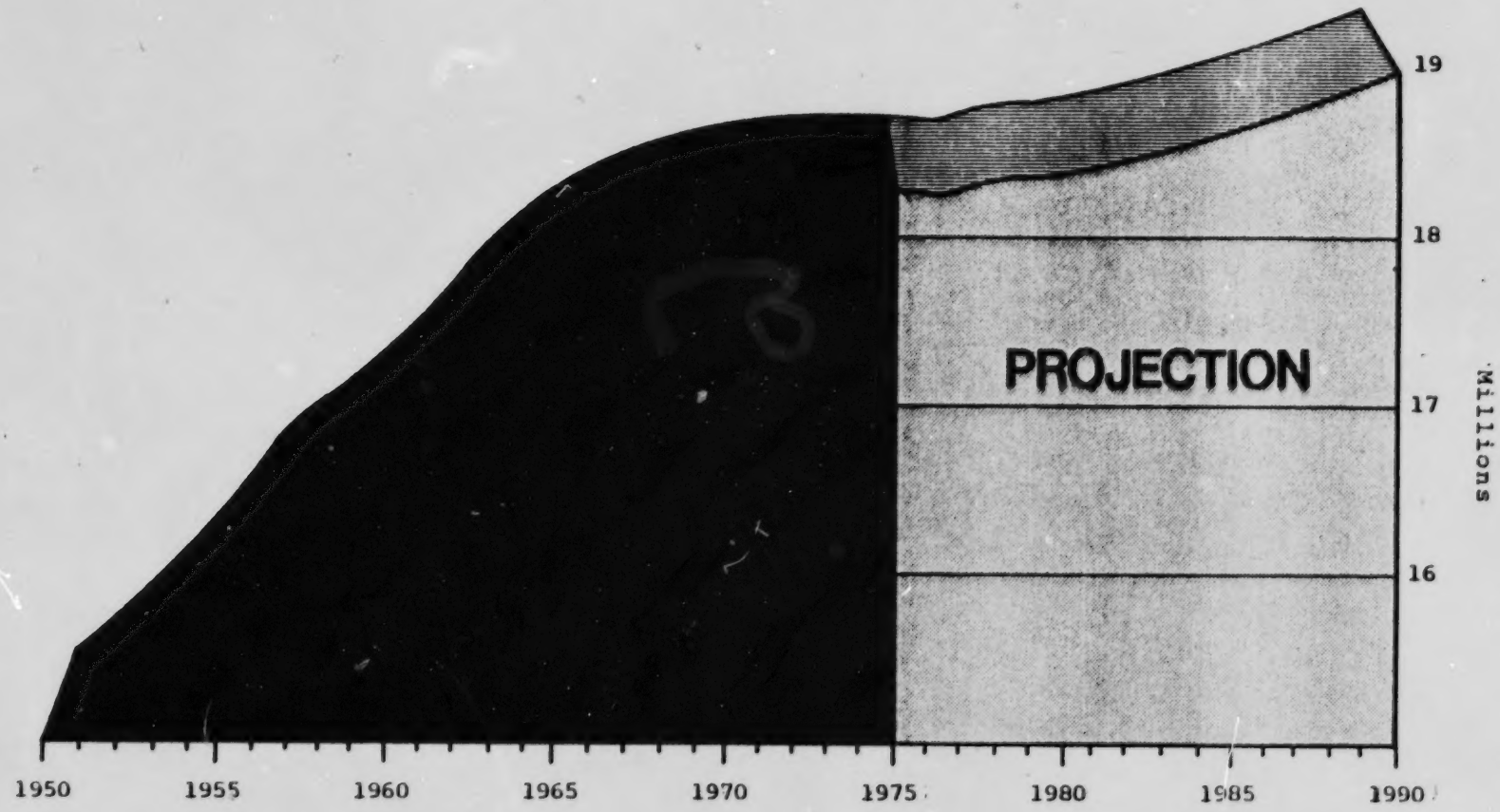

Figure 2.4. Trend Data for New York State Population, 1950-1990.

sociological, and psychological implications of this increase represent not only challenges but opportunities. The creation of jobs for young adults must be a prime goal of both national and New York State governments. For example, if young adults in New York State do not find jobs comensurate with their skills and training, a significant loss of qualified workers could result. The outmigration of young citizens best qualified by virtue of ability, education, and experience to solve the State's pressing social, political and economic problems may ensue.

The numbers of pupils to be educated will decline and not trend upward until the late 1980's when changes in the elementary and secondary school population are considered. Such a decline in pupils would assuage the financial impact upon New York State's revenue.

Price
Deflation

The price deflator, Purchasing Power of the Consumer Dollar, was used to translate current dollars into constant dollars. Figure 2.5 depicts the trend data over the past quarter of a century for Wholesale Prices, Consumer Prices, and the Purchasing Power of the Consumer Dollar. Table 2.2 contains the numerical data and yearly percentage growth rates for these three indexes.

Economic statistics on a quarter by quarter basis can be very tricky. The figures can reflect temporary zigs and zags

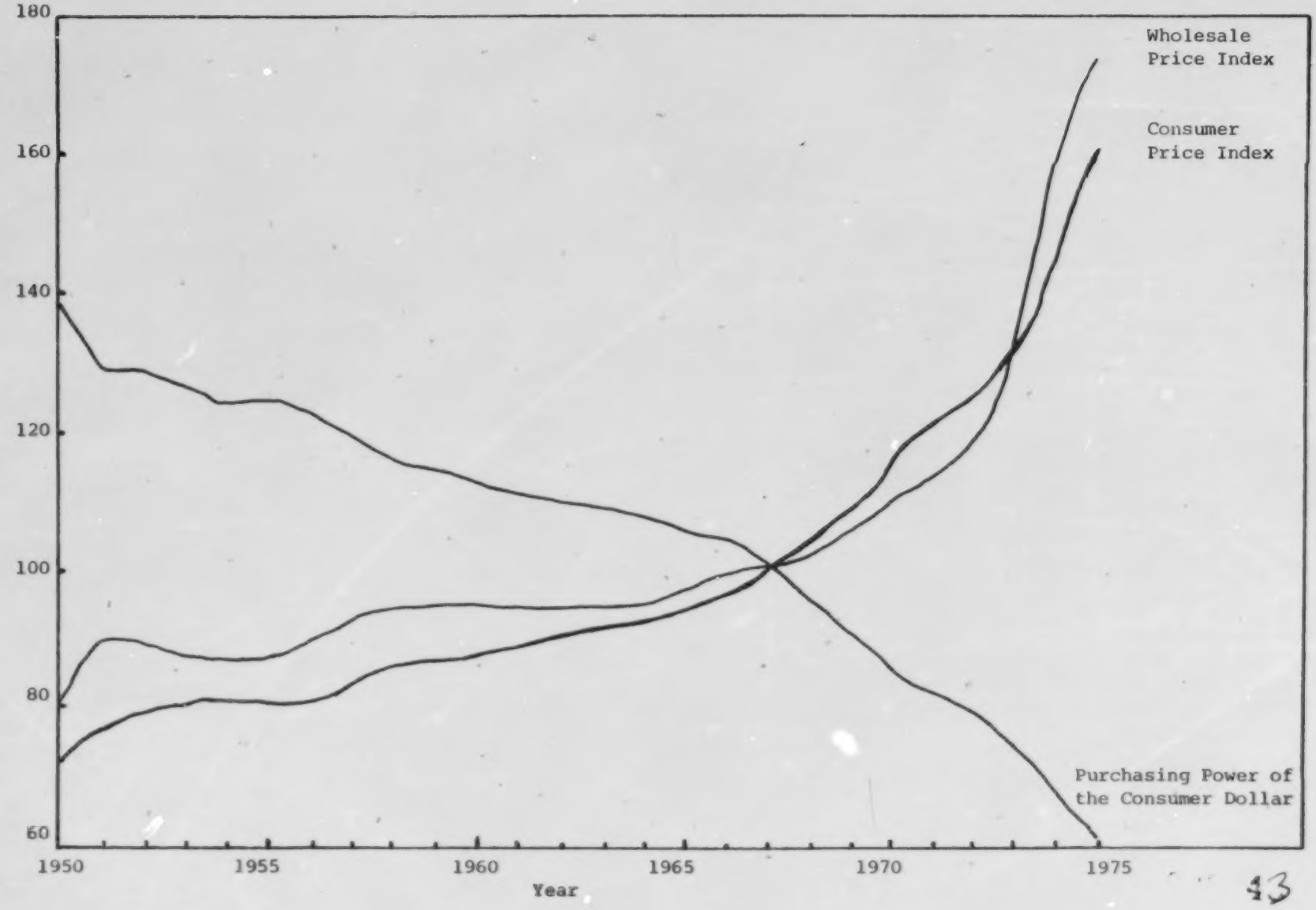

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Figure 2.5 Trend Data for the Wholesale Price Index, Consumer Price Index and the Purchasing Power of the Dollar Index in Current Dollars.

TABLE 2.2

TREND DATA ON THE WHOLESALE PRICE INDEX, CONSUMER PRICE INDEX, AND PURCHASING POWER OF CONSUMER DOLLAR INDEX FOR THE UNITED STATES

YEAR	Wholesale Price Index (1967 = 100)	Consumer Price Index (1967 = 100)	Purchasing Power of the Consumer Dollar Index (1967 = 100)	YEARLY PERCENTAGE GROWTH INCREASE		
				Wholesale Price Index	Consumer Price Index	Purchasing Power of the Consumer Dollar Index
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1950	81.8	72.1	1.387			
1951	91.9	77.8	1.285	12.34	7.91	-7.35
1952	88.6	79.5	1.285	- 3.59	2.19	0
1953	87.4	80.1	1.248	- 1.35	.75	-2.88
1954	87.6	80.5	1.242	.22	.50	- .48
1955	87.8	80.2	1.247	.22	- .37	.40
1956	90.7	81.4	1.229	1.14	1.50	-1.44
1957	93.3	84.3	1.186	2.87	3.56	-3.50
1958	94.6	86.6	1.155	1.39	2.73	-2.61
1959	94.8	87.3	1.145	.21	.81	- .87
1960	94.9	88.7	1.127	.11	1.60	-1.57
1961	94.5	89.6	1.116	- .42	1.01	- .98
1962	94.8	90.6	1.104	.32	1.12	-1.08
1963	94.5	91.7	1.091	- .32	1.21	-1.18
1964	94.7	92.9	1.076	.21	1.31	-1.37
1965	96.6	94.5	1.058	2.01	1.72	-1.67
1966	99.8	97.2	1.029	3.31	2.86	-2.74
1967	100.0	100.0	1.000	.20	2.88	-2.82
1968	102.5	104.2	.960	2.50	4.20	-4.00
1969	106.5	109.8	.911	3.90	5.37	-5.10
1970	110.4	116.3	.860	3.66	5.92	-5.60
1971	113.9	121.3	.824	3.17	4.30	-4.19
1972	119.1	125.3	.799	4.57	3.30	-3.03
1973	134.7	133.1	.752	13.10	6.23	-5.88
1974	160.1	147.7	.677	18.86	10.97	-9.97
1975	174.9	161.2	.620	9.24	9.14	-8.42

Note: See end of chapter for data sources.

that tend to obscure long term trends. As the years progress data begin to harden into more convincing reflections of what has really occurred. The final reading on the Consumer Price Index for 1976, reflecting inflation at the over-the-counter family level, makes rewarding reading regarding the decline of inflation. In December of 1976, consumer prices were about 4.4 percent higher than in December of 1975. By long term historic trends that is not the greatest of news. Related to our experience in the mid-seventies, this rate of inflation was modest indeed. In 1973, even before the full impact of the oil price increases had been felt, prices rose 6.23 percent. In 1974, as the rise in energy costs made themselves felt, inflation soared to a frightening double digit figure of 10.97 percent. In 1975, improvement was made. Inflation dropped to a 9.14 percent rate. The 7.51 percent rate for 1976, therefore, looks good by comparison to the past few years.

Is the speed of inflation diminishing? Will it continue over the next decade? Can the combination of federal, state, and local policies, consumer resistance, and increased efficiency and productivity keep the rate down? Surely the low rate of the late 1950's and early 1960's cannot be maintained. Inflation, like other economic forces, develops a momentum of its own. Once in motion, it is hard to slow down.

In 1950, the Consumer Price Index stood at 72.1 (1967 = 100). Year by year the index rose, pausing in some years only to get new momentum. By the end of 1975 the Consumer Price Index stood at 161.2. This reflected a 3.27 percent long term

historic compound annual growth rate. Over the past half decade the rate has been 6.74 percent. In the publication, Five Year Budget Projections: Fiscal Years 1978 - 1982,[1] "The rate of inflation, as measured by the annual percentage change in the Consumer Price Index (CPI), is assumed to fall from 5.7 percent in 1976 to 4.8 percent in 1978 and 1979 and then rise to 5.8 percent by the end of 1982....." This results in a compound annual growth rate of 5.17 percent.

The compound annual growth rate from 1975 to 1990 is 6.24 percent when various statistical procedures are utilized to compute the regression equation having the highest coefficient of forecasting efficiency. This rate appears too high since inflation in 1976 has slowed down and since various federal, state, and local governments are leaning toward austerity-bent policies. Of course, no one has a crystal ball that will indicate precisely what will occur in the next decade and a half. A compound annual growth rate of about 3.87 percent in the Consumer Price Index, however, is more realistic than a 6.5 percent increase. It is more in keeping with its long term historic trend than the higher rates of the early seventies. It appears unwise to assume that the Consumer Price Index will rise in the future at the slightly more than one percent rate of the early sixties.

The overall compound annual growth rate of 3.87 percent was arrived at in three stages. From 1977 to 1981 infla-

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[1] Five Year Budget Projections: Fiscal Years 1978-1982, of the United States, Congressional Budget Office, December 1976.

tion was projected at a 4.0 percent rate; from 1982 to 1986, at a 3.5 percent rate; and from 1987 to 1990, at a 3.27 percent rate.

Applying this compound annual growth rate yields a 1990 value of 284.9 for the Consumer Price Index (1967 = 100). This reflects a value of 35 cents for the Purchasing Power of the Consumer Dollar (1967 = 100) in 1990. These rates are high in relation to the past quarter century, but appear realistic.

THE NATIONAL REVENUE SETTING IN CURRENT DOLLARS

As indicated in the methodology, current as well as constant dollars were utilized so that the effects of inflation upon the purchasing power of the consumer dollar could be ascertained. It is important to note that United States revenue data refers to the aggregation of local, state, and federal governments' revenue rather than to only revenue for the federal government. The components of total United States revenue are derived and long term historic trends are analyzed. Yearly growth percentage rates are computed and evaluated. The percentage that each revenue component is of total revenue is computed and long term historic trends noted and discussed. Lastly, as noted previously in Chapter 1 of this study, total revenue was projected from the measure itself, from four different perspectives, and also projected from the aggregation of its component parts by four different statistical formulas. The pro-

jections were smoothed considering the effects of the underlying assumptions of Chapter 1.

Total General Revenue
United States

In 1950, total general revenue for local, state, and federal governments amounted to $58,486 million increasing to $130,618 million in 1960, to $272,480 million in 1970, and to $403,208 million in 1975. Such increases tended to follow an exponential function. Revenue more than doubled in each decade over the past quarter century.

Total revenue is defined as general revenues, utility and liquor store revenue, and insurance trust revenue. Not all revenue is available to support the public purposes of local, state, and federal governments. Some of it must be held in trust for employee retirement, unemployment insurance, etc. Table 2.3 contains a breakdown of United States total general revenue over a quarter of a century. Figure 2.6 graphically depicts total general revenue in current and constant dollars (1950 = 100).

Figure 2.7 and Figure 2.8 portray total general revenue for all local, state, and federal governments. Total general revenue consists of individual income taxes; corporation income taxes; sales, gross receipts, and custom taxes; property taxes; license fees and other taxes; and other charges and miscellaneous taxes. Individual income taxes have increased at a greater rate than other tax revenue components over the past

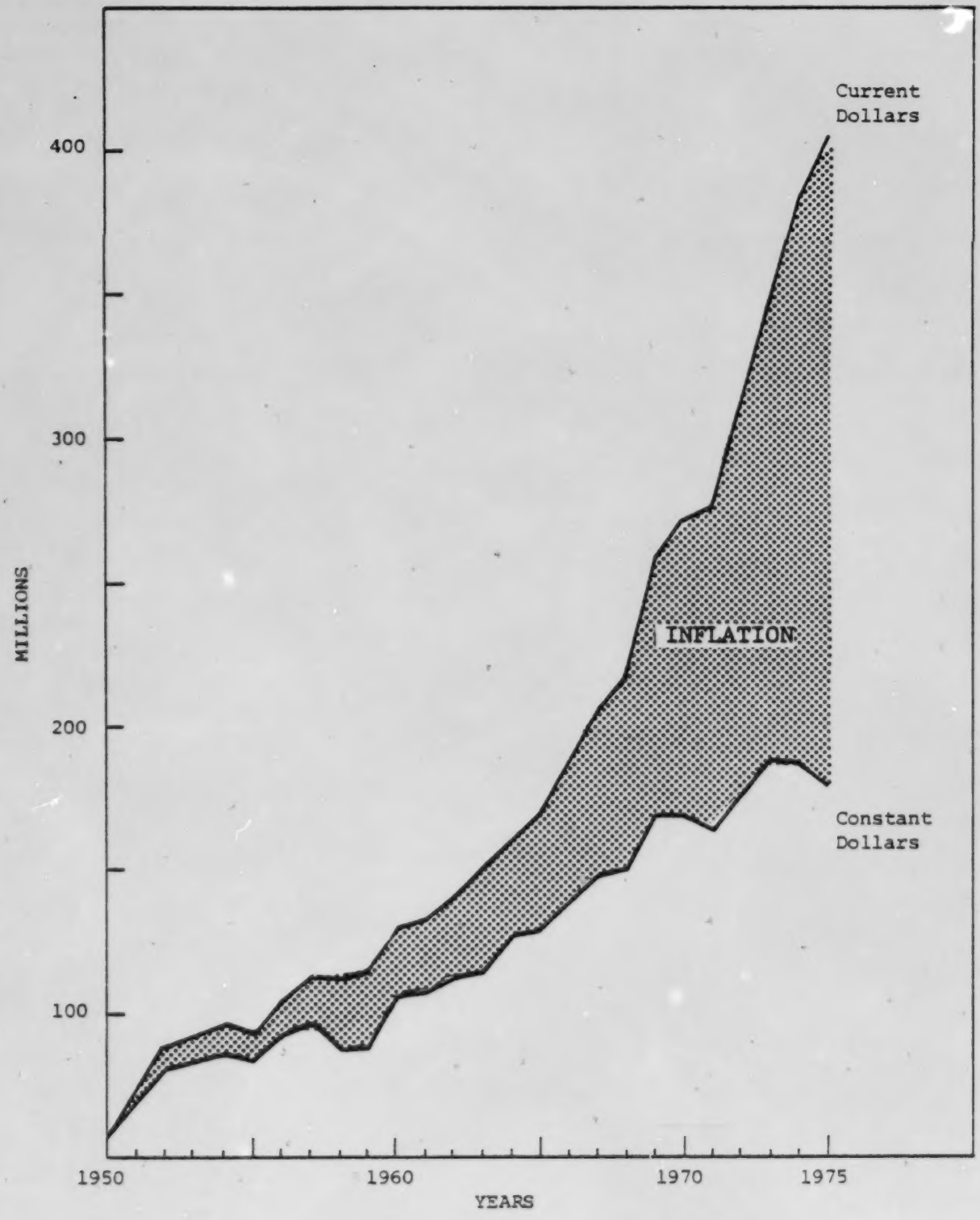

Figure 2.6. Trend Data for United States Total General Revenue in Current and Constant Dollars (1950 = 100).

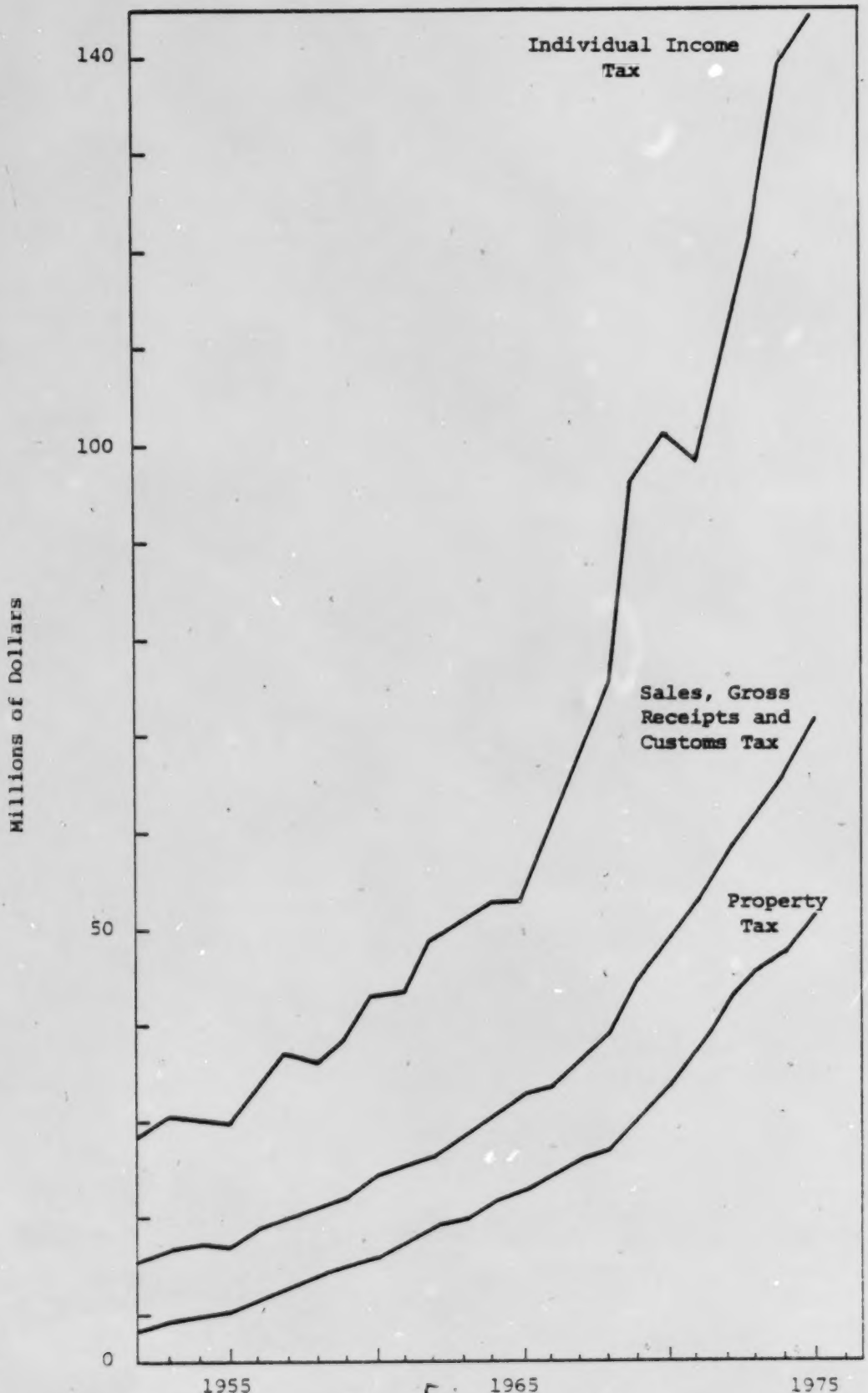

Figure 2.7. Trend Data for United States Individual Income Tax; Sales, Gross Receipts and Customs Tax; and Property Tax

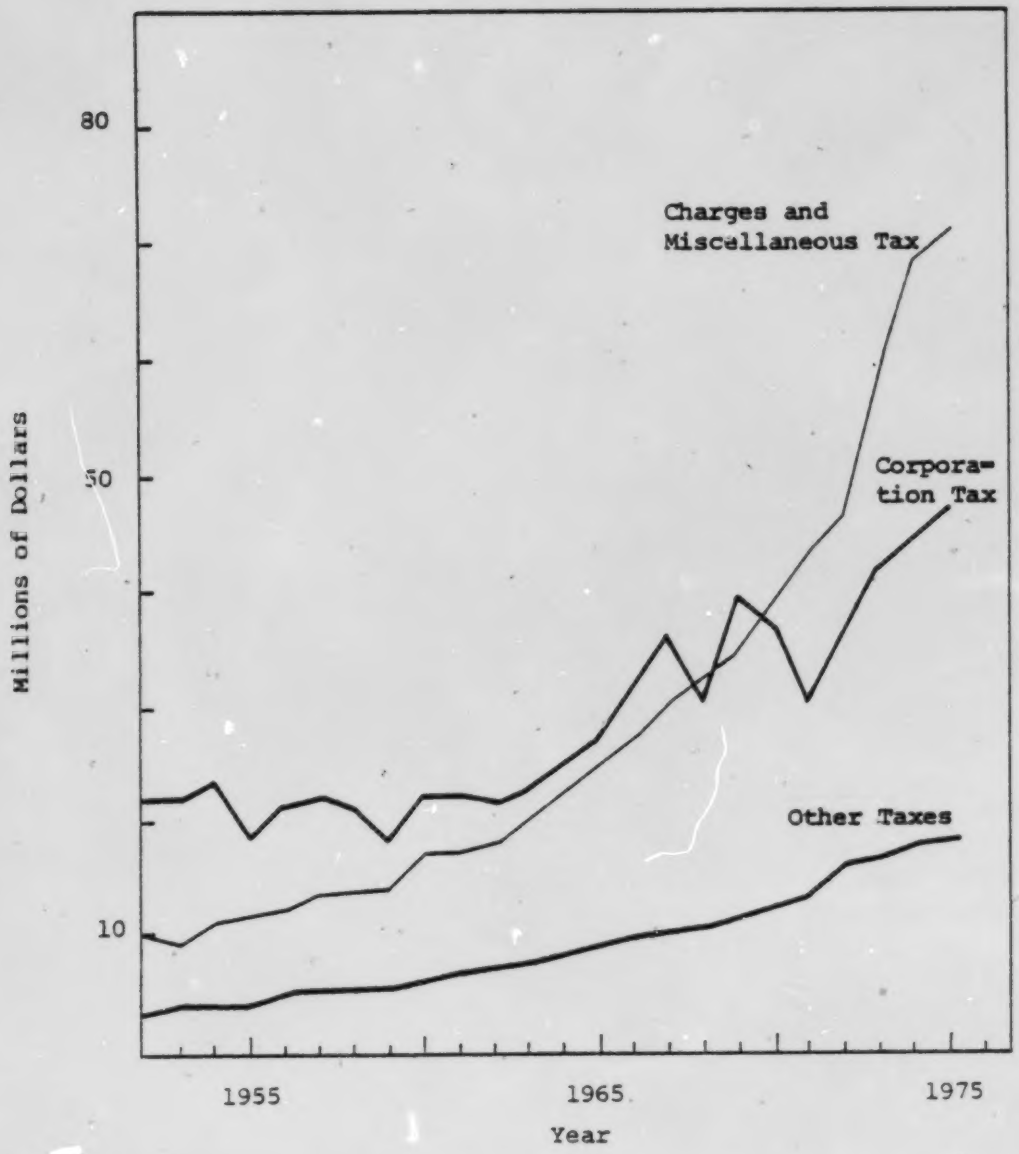

Figure 2.8. Trend Data for United States Charges and Miscellaneous Tax; Corporation Tax; and Other Taxes in Current Dollars.

TABLE 2.3

TOTAL GENERAL REVENUE (CURRENT DOLLARS) AND ITS VARIOUS COMPONENTS, UNITED STATES, ALL GOVERNMENTS, 1950 - 1975

YEAR	TOTAL GENERAL REVENUE	PERSONAL INCOME TAXES	CORPORATION INCOME TAXES	SALES, GROSS RECEIPTS & CUSTOMS TAXES	PROPERTY TAXES	OTHER TAXES, INCLUDING LICENSE TAXES	CHARGES AND MISCELLANEOUS REVENUES
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1950	$ 58,486	$ 16,533	$11,081	$12,997	$ 7,349	$ 3,140	$ 7,386
1951							
1952	89,230	28,919	22,072	15,689	8,652	3,735	10,163
1953	93,124	30,881	22,055	17,279	9,375	4,112	9,420
1954	95,844	30,669	21,879	17,643	9,967	4,317	11,369
1955	93,264	29,984	18,604	17,221	10,735	4,527	12,192
1956	104,494	33,725	21,770	19,160	11,749	5,190	12,900
1957	112,723	37,374	22,151	20,594	12,864	5,650	14,091
1958	112,466	36,483	21,092	21,102	14,047	5,661	14,079
1959[1]	114,178	38,713	18,310	21,769	14,983	5,862	14,542
1960[2]	130,618	43,178	22,674	24,452	16,405	6,411	17,499
1961	133,969	43,951	22,220	25,112	18,002	7,047	17,637
1962	142,397	48,608	21,831	26,922	19,054	7,402	18,581
1963	151,751	50,855	23,084	28,661	19,833	8,378	20,940
1964	160,740	52,488	25,188	30,538	21,241	8,838	22,448
1965	169,691	52,882	27,390	32,904	22,583	9,191	24,739
1966	188,368	60,206	32,111	33,726	24,670	10,029	27,626
1967	206,696	67,352	36,198	36,336	26,047	10,188	30,575
1968	217,323	76,034	31,183	39,186	27,747	10,976	32,197
1969	258,242	96,157	39,858	44,345	30,673	11,675	35,534
1970	272,480	101,224	36,567	48,619	34,054	12,413	39,603
1971	275,669	98,130	30,209	52,660	37,852	13,402	43,417
1972	309,460	109,974	36,582	57,589	42,133	16,256	46,926
1973	345,935	121,240	41,578	61,769	45,283	16,725	59,340
1974	383,733	138,443	44,635	66,632	47,705	18,034	68,284
1975	403,208	143,840	47,263	70,905	51,491	18,151	71,558

[1]Includes Alaska. [2]Denotes first year for which figures include Alaska and Hawaii.

Note: See end of chaper for data sources.

two and a half decades. Figure 2.9 to Figure 2.15 inclusive depict the yearly percentages for total general revenue and increases in its various components. Table 2.4 contains the data on yearly percentage growth rates of the various components of general revenues. Such data were extremely helpful in projecting revenue utilizing periodic and/or harmonic regression analysis.

Table 2.5 enumerates the percentage that each component of general revenue is of total general revenue. Figures 2.16 to 2.18 graphically display these percentages.

Current dollars were translated into constant dollars by the price deflator entitled Purchasing Power of the Consumer Dollar. Table 2.2 contains the data on the Wholesale Price Index, Consumer Price Index, and Purchasing Power of the Consumer Dollar. While there are numerous other price deflators that could have been used to deflate current dollars into constant dollars, the Purchasing Power of the Consumer Dollar was selected because of its wise use. The Purchasing Power of the Consumer Dollar Index was set equal to 100.0 for 1950 because the majority of the economic and demographic measures used herein data back to 1950. The intent was to show the eroding effects of inflation on the purchasing power of the various tax revenue dollars over the past quarter century. See Table 2.6.

In 1950, total general revenue in constant dollars for all local, state, and federal governments amounted to $58,486 million increasing to $180,234 million in 1975. See Table 2.7.

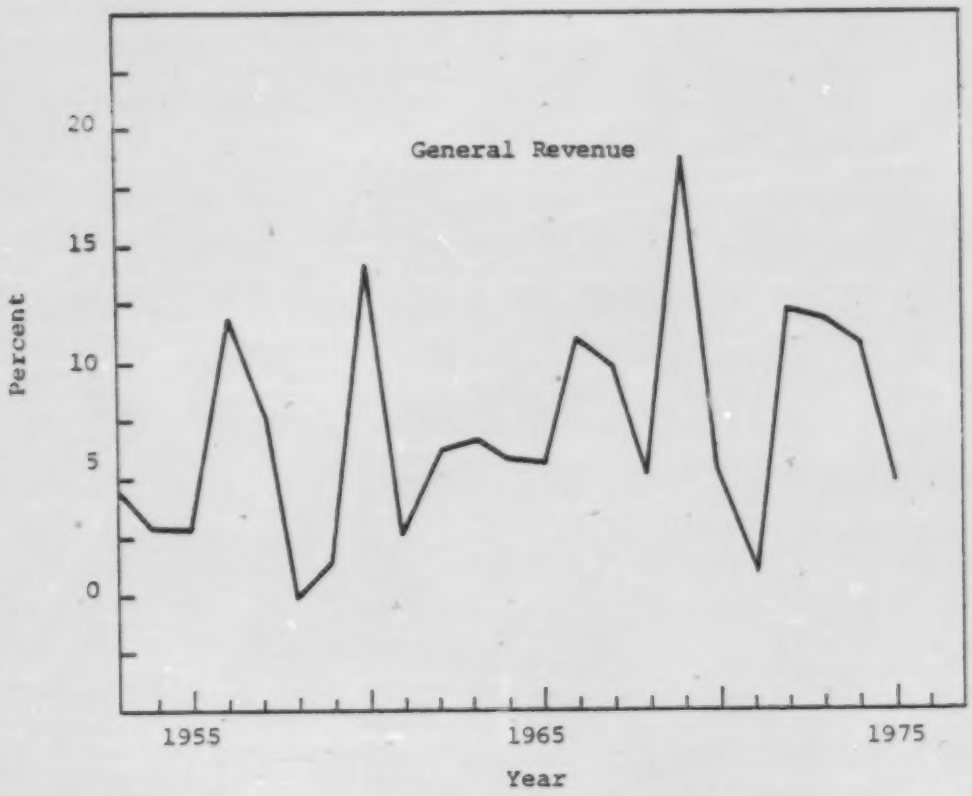

Figure 2.9. Trend Data for United States General Revenue Yearly Growth in Current Dollars.

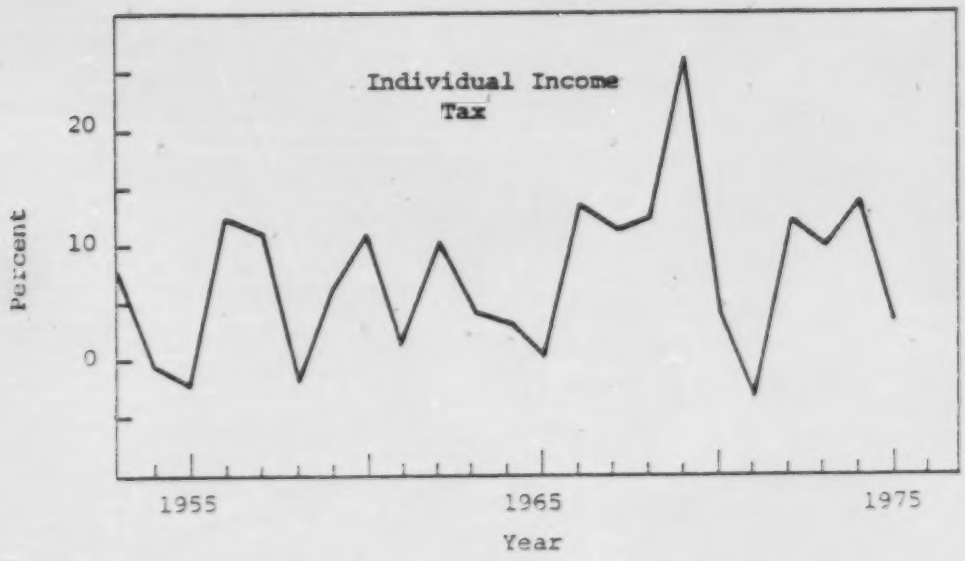

Figure 2.10. Trend Data for United States Individual Income Tax Yearly Growth in Current Dollars.

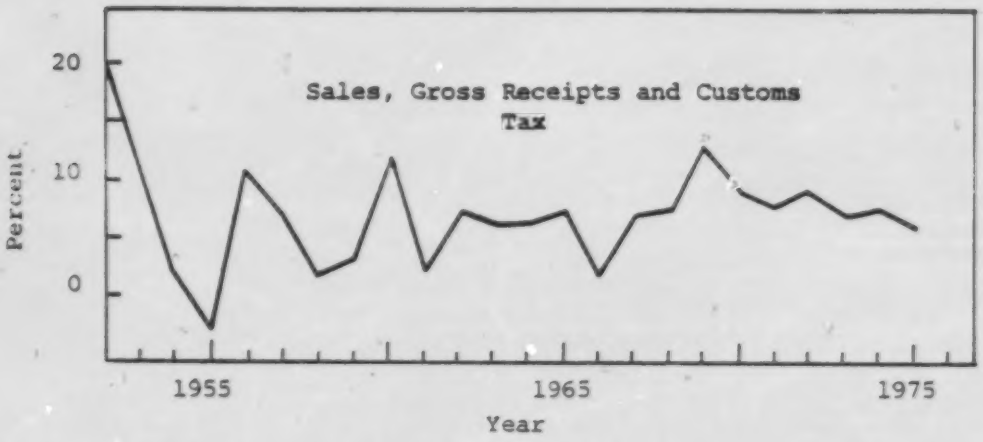

Figure 2.11 Trend Data for United States Sales, Gross Receipts and Customs Tax Yearly Growth Rates in Current Dollars

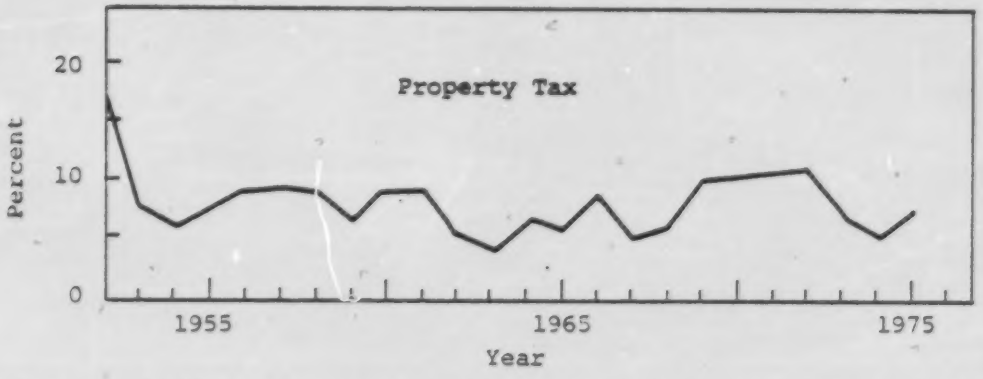

Figure 2.12. Trend Data for United States Property Tax Yearly Growth Rates in Current Dollars.

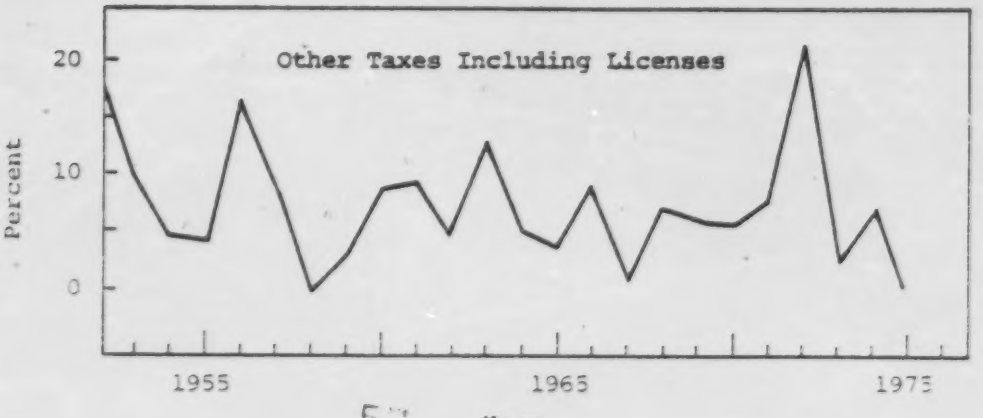

Figure 2.13. Trend Data for United States Other Taxes Including Licenses Yearly Growth Rates in Current Dollars.

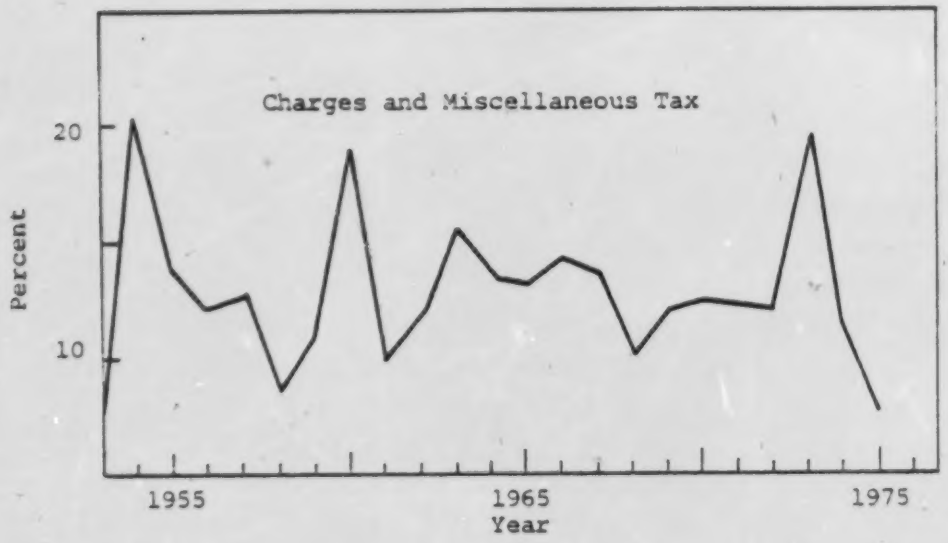

Figure 2.14. Trend Data for United States Charges and Miscellaneous Tax Yearly Growth Rates in Current Dollars.

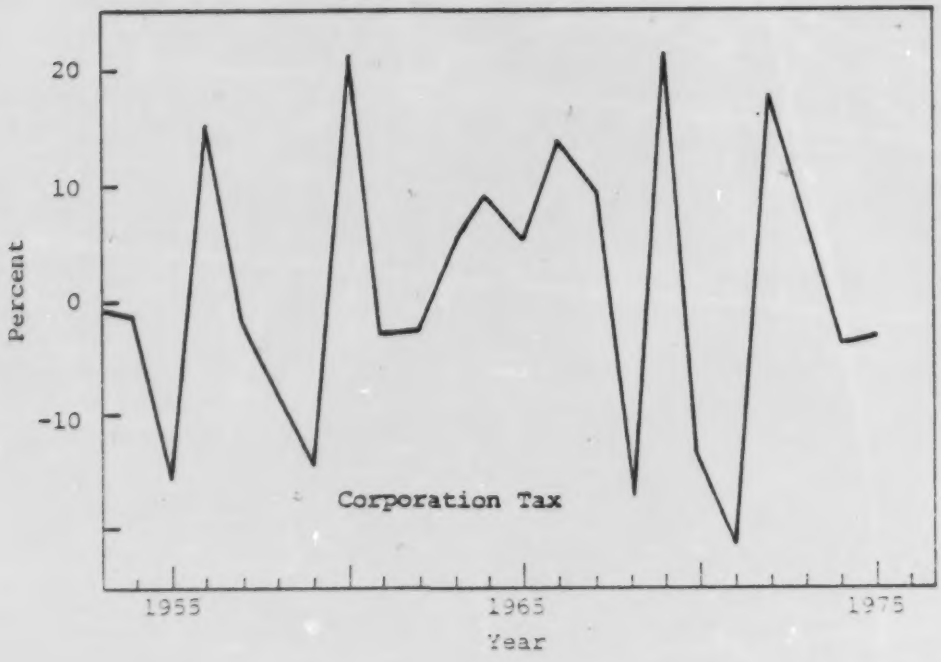

Figure 2.15. Trend Data for United States Corporation Tax Yearly Growth Rates in Current Dollars.

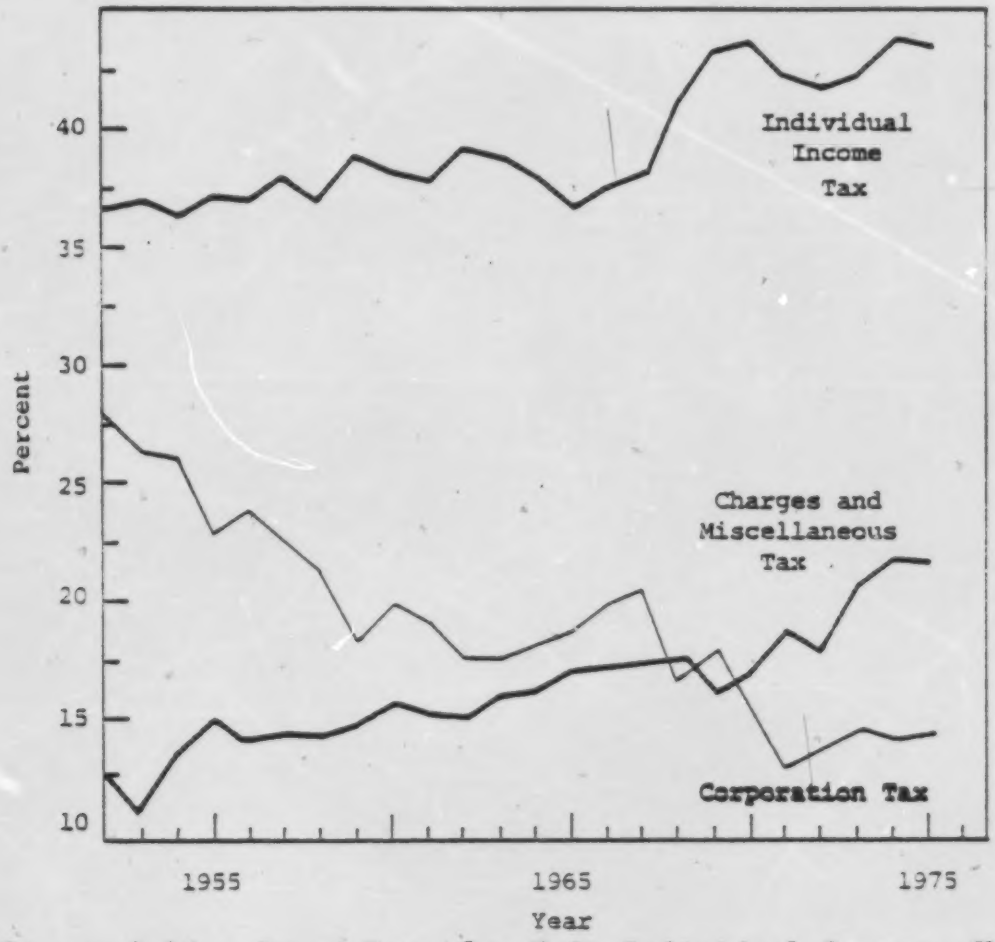

Figure 2.16. Trend Data for U.S. Individual Income; Charges and Miscellaneous; and Corporation Taxes as a Percent of Total United States General Revenue.

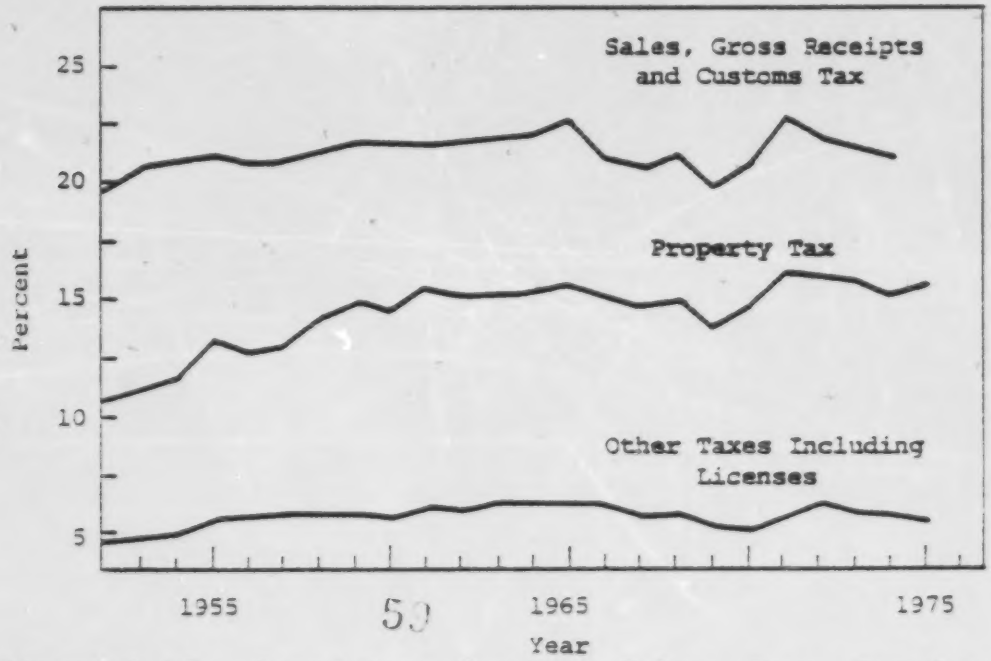

Figure 2.17. Trend Data for U.S. Sales, Gross Receipts and Customs; Property; and Other Taxes Including Licenses as a

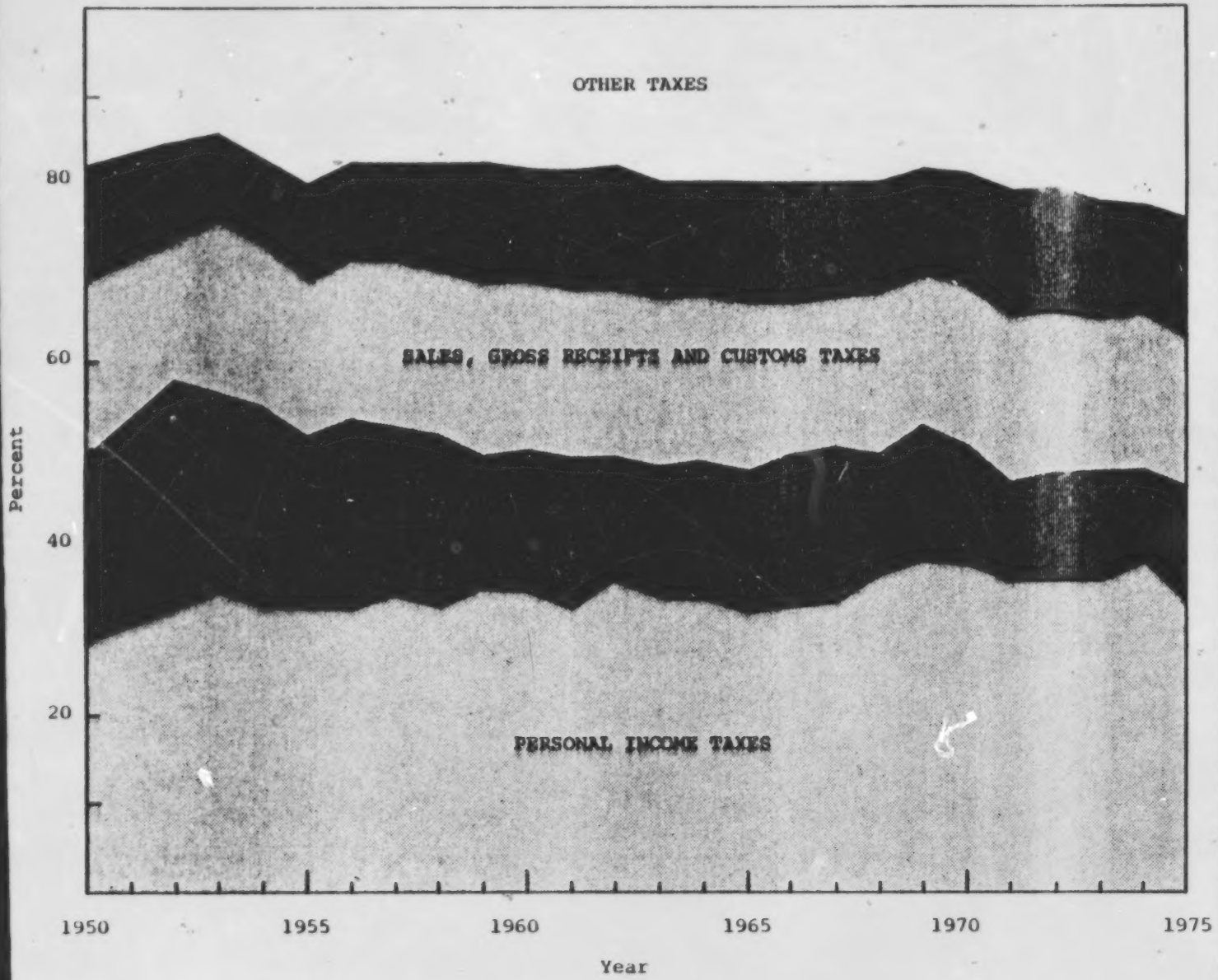

Figure 2.18. Percent Various Tax Components are of Total United States General Revenues, 1950-1975

TABLE 2.4

YEARLY PERCENT GROWTH RATES FOR SELECTED UNITED STATES REVENUES, ALL GOVERNMENTS, IN CURRENT DOLLARS

YEAR	PERSONAL INCOME TAXES	CORPORATION INCOME TAXES	SALES, GROSS RECEIPTS & CUSTOMS TAXES	PROPERTY TAXES	OTHER TAXES, INCLUDING LICENSE TAXES	CHARGES & MISCEL-LANEOUS REVENUES
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1950						
1951						
1952	74.9	99.2	20.7	17.7	18.9	37.6
1953	6.8	- .07	10.1	8.4	10.1	- 7.3
1954	- .7	- .8	2.1	6.3	5.0	20.7
1955	- 2.2	-15.0	- 2.4	7.7	4.9	7.2
1956	12.5	17.0	11.3	9.4	16.6	5.8
1957	10.8	1.8	7.5	9.5	8.9	9.2
1958	- 2.3	- 4.8	2.5	9.2	.2	- .08
1959	6.1	-13.2	3.2	6.7	3.6	3.3
1960	11.5	23.8	12.3	9.5	9.4	20.3
1961	1.7	- 2.0	2.7	9.7	9.9	.8
1962	10.6	- 1.8	7.2	5.8	5.0	5.4
1963	4.6	5.8	6.5	4.1	13.2	12.7
1964	3.2	9.1	6.5	7.1	5.5	7.2
1965	.8	8.7	7.7	6.3	4.0	10.2
1966	13.8	17.2	2.5	9.2	9.1	11.7
1967	11.9	12.7	7.7	5.6	1.6	10.7
1968	12.9	-13.8	7.8	6.5	7.7	5.3
1969	26.5	27.8	13.2	10.5	6.4	10.4
1970	5.3	- 8.3	9.6	11.0	6.3	11.5
1971	- 3.1	-17.4	8.3	11.2	8.0	9.6
1972	12.1	21.1	9.4	11.3	21.3	8.1
1973	10.2	13.7	7.3	7.4	2.9	26.5
1974	14.2	7.4	7.9	5.3	7.8	15.1
1975	3.9	5.9	6.4	7.9	.6	4.8

Note: See end of chapter for data source.

TABLE 2.5

PERCENT SELECTED REVENUE MEASURES ARE OF TOTAL GENERAL REVENUE, UNITED STATES, ALL GOVERNMENTS

YEAR	PERSONAL INCOME TAXES	CORPORATION INCOME TAXES	SALES, GROSS RECEIPTS & CUSTOMS TAXES	PROPERTY TAXES	OTHER TAXES, INCLUDING LICENSES TAXES	CHARGES AND MISCELLANEOUS REVENUES
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1950						
1951						
1952	36.6	27.9	19.8	10.9	4.7	12.9
1953	36.9	26.3	20.6	11.2	4.9	11.3
1954	36.3	25.9	20.9	11.8	5.1	13.5
1955	37.0	22.9	21.2	13.2	5.6	15.0
1956	36.8	23.8	20.9	12.8	5.7	14.1
1957	37.9	22.5	20.9	13.0	5.7	14.3
1958	37.1	21.4	21.4	14.3	5.8	14.3
1959	38.9	18.4	21.8	15.0	5.9	14.6
1960	38.2	20.0	21.6	14.5	5.7	15.5
1961	37.8	19.1	21.6	15.5	6.1	15.2
1962	39.3	17.6	21.7	15.4	6.0	15.0
1963	38.9	17.6	21.9	15.2	6.4	16.0
1964	38.0	18.2	22.1	15.4	6.4	16.2
1965	36.5	18.9	22.7	15.6	6.3	17.1
1966	37.5	20.0	21.0	15.3	6.2	17.2
1967	38.2	20.6	20.6	14.8	5.8	17.4
1968	41.1	16.8	21.2	15.0	5.9	17.4
1969	43.2	17.9	19.9	13.8	5.2	16.0
1970	43.5	15.7	20.9	14.6	5.3	17.0
1971	42.3	13.0	22.7	16.3	5.8	18.7
1972	41.9	13.9	21.9	16.0	6.2	17.9
1973	42.3	14.5	21.6	15.8	5.8	20.7
1974	43.9	14.1	21.1	15.1	5.7	21.6
1975	43.4	14.3	21.4	15.5	5.5	21.6

Note: See end of chapter for data source.

TABLE 2.6

TREND DATA ON THE CONSUMER PRICE INDEX
AND THE PURCHASING POWER OF THE DOLLAR INDEX
FOR THE UNITED STATES (1950 = 100)

YEAR	CONSUMER PRICE INDEX	PURCHASING POWER OF THE CONSUMER DOLLAR	YEAR	CONSUMER PRICE INDEX	PURCHASING POWER OF THE CONSUMER DOLLAR
(1)	(2)	(3)	(4)	(5)	(6)
1950	100.0	1.000	1970	161.3	.620
1951	108.1	.926	1971	168.4	.594
1952	110.4	.906	1972	173.6	.576
1953	111.2	.899	1973	184.5	.542
1954	111.7	.895	1974	204.9	.488
1955	111.2	.899	1975	223.7	.447
1956	112.9	.886	1976	240.4	.416
1957	117.1	.855	1977	250.0	.400
1958	120.2	.832	1978	259.7	.385
1959	121.2	.825	1979	270.3	.370
1960	123.2	.812	1980	281.7	.355
1961	124.4	.804	1981	292.4	.342
1962	125.8	.795	1982	303.0	.330
1963	127.2	.786	1983	313.5	.319
1964	127.9	.782	1984	323.6	.309
1965	131.2	.762	1985	335.6	.298
1966	135.1	.741	1986	347.2	.288
1967	138.9	.720	1987	358.4	.279
1968	144.5	.692	1988	370.4	.270
1969	152.4	.656	1989	381.7	.262
			1990	395.3	.253

NOTE: See end of chapter for data sources.

TABLE 2.7

TOTAL GENERAL REVENUES (CONSTANT DOLLARS, 1950 = 100) AND ITS VARIOUS COMPONENTS
UNITED STATES, ALL GOVERNMENTS, 1950 - 1975

YEAR	TOTAL GENERAL REVENUE	PERSONAL INCOME TAXES	CORPORATION INCOME TAXES	SALES, GROSS RECEIPTS & CUSTOMS TAXES	PROPERTY TAXES	OTHER TAXES, INCLUDING LICENSE TAXES	CHARGES AND MISCELLANEOUS REVENUES
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1950	$ 58,486	$ 16,533	$11,081	$12,997	$ 7,349	$3,140	$ 7,386
1951							
1952	80,842.2	26,200.6	19,997.2	14,214.2	7,838.7	3,383.9	9,207.7
1953	83,718.5	27,762.0	19,827.4	15,533.8	8,428.1	3,696.7	8,468.6
1954	85,780.4	27,448.8	19,581.7	15,790.5	8,920.5	3,863.7	10,175.3
1955	83,844.3	26,955.8	16,725.0	15,481.7	9,650.8	4,069.8	10,960.0
1956	92,581.7	29,880.4	19,288.2	16,975.8	10,409.6	4,598.3	11,429.4
1957	96,378.2	31,954.8	18,939.1	17,607.9	10,998.7	4,830.8	12,047.8
1958	93,571.7	30,353.9	17,548.5	17,556.9	11,687.1	4,710.0	11,713.7
1959	94,196.9	31,938.2	15,105.8	17,959.4	12,361.0	4,836.2	11,997.2
1960	106,061.8	35,060.5	18,411.3	19,855.0	13,320.9	5,205.7	14,209.2
1961	107,711.1	35,336.6	17,864.9	20,190.4	14,473.6	5,665.8	14,180.1
1962	113,205.6	38,643.4	17,355.7	21,403.0	15,147.9	5,884.6	14,771.9
1963	119,276.3	39,972.0	18,144.0	22,527.5	15,588.7	6,585.1	16,458.8
1964	126,341.6	41,255.6	19,797.8	24,002.9	16,695.4	6,946.7	17,644.1
1965	129,304.5	40,296.1	20,871.2	25,072.8	17,208.2	7,003.5	18,851.1
1966	139,580.7	44,612.6	23,794.3	24,991.0	18,280.5	7,431.5	20,470.9
1967	148,821.1	48,493.4	26,062.6	26,161.9	18,753.8	7,335.4	22,014.0
1968	150,387.5	52,615.5	21,578.6	27,116.7	19,200.9	7,595.4	22,280.3
1969	169,406.8	63,079.0	26,146.8	29,090.3	20,121.5	7,658.8	23,310.3
1970	168,937.6	62,758.9	22,671.5	30,143.8	21,113.5	7,696.1	24,553.9
1971	163,747.4	58,289.2	17,944.1	31,280.0	22,484.1	7,960.8	25,789.7
1972	178,249.0	63,345.0	21,071.2	33,171.3	24,268.6	9,363.5	27,029.4
1973	187,496.8	65,712.1	22,535.3	33,478.8	24,543.4	9,065.0	32,162.3
1974	187,261.7	67,560.2	21,781.9	32,516.4	23,280.0	8,800.6	33,322.6
1975	180,234.0	60,273.5	21,126.6	31,694.5	23,016.5	8,113.5	31,986.4

Note: See end of chapter for data source.

The increase tended to follow an exponential function and amounted to a compound annual growth rate of 4.60 percent over the 1950 - 1975 period. Total general revenue in constant dollars tended to increase at a slower rate each decade because of the eroding effect of inflation.

Crude Elasticity Ratios For General Revenue

Separate crude elasticity ratios (current dollars) were computed as a guide for testing the reasonableness of the revenue component taxes. These were done without regard to changes in tax rates or rate structure. Crude revenue elasticities were derived from the ratio of the yearly percentage increase for a given tax divided by the yearly percentage increase in United States Personal Income. The crude revenue elasticity ratios are listed in Table 2.8. Crude elasticity ratios were helpful in identifying whence large changes in rates or tax structure occured. Conversely, they were not particularly helpful in trend projections.

PROJECTED UNITED STATES REVENUES FOR TOTAL GENERAL REVENUE AND ITS VARIOUS COMPONENTS

United States revenue was projected utilizing four different methods. The object was to produce the regression equation having the highest forecasting efficiency coefficient. Total general revenue was projected from the measure itself and then disaggregated to produce values for its various com-

TABLE 2.8

CRUDE ELASTICITY RATIOS FOR SELECTED UNITED STATES TAXES IN CURRENT DOLLARS

YEAR	INDIVIDUAL INCOME TAXES	CORPORATION TAXES	SALES, GROSS RECEIPTS, AND CUSTOMS TAXES	PROPERTY TAXES	OTHER TAXES INCLUDING LICENSES	CHARGES AND MISCELLANEOUS REVENUES
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1952				1.231	1.487	- 1.078
1953	1.178	- 0.011	1.494	-9.198	-7.262	-35.106
1954	-1.041	1.162	-3.069	-3.451	-2.178	- 3.108
1955	-0.312	6.702	1.071	0.757	1.174	.465
1956	1.755	1.364	0.902	0.877	0.819	0.853
1957	1.991	0.162	0.692	-3.857	-0.812	0.036
1958	-0.829	2.005	-1.345	1.090	0.581	0.538
1959	0.990	- 2.158	0.517	0.823	0.812	1.763
1960	2.528	2.066	1.069	5.438	5.541	0.441
1961	-0.454	- 1.118	1.508	0.552	0.475	0.505
1962	1.712	- 0.165	0.680	0.884	2.852	2.746
1963	0.893	1.242	1.397	2.211	1.711	2.243
1964	0.467	2.838	2.039	8.417	5.321	13.596
1965	0.090	11.646	10.321	0.667	0.658	0.843
1966	1.545	1.245	0.180	0.470	0.134	0.899
1967	1.655	1.072	0.652	0.506	0.600	0.412
1968	1.361	- 1.075	0.608	0.398	0.241	0.392
1969	2.941	1.051	0.495	2.092	1.199	2.173
1970	0.689	- 1.567	1.829	-3.649	-2.607	- 3.151
1971	-0.436	5.688	-2.719	0.937	1.764	0.671
1972	1.312	1.748	0.775	0.731	0.282	2.582
1973	0.842	1.333	0.709	0.377	0.552	1.062
1974	-1.503	0.518	0.555	2.036	0.166	1.231
1975	0.462	1.510	1.645			

ponents. Total general revenue was also projected from projections of its various components through the process of aggregation as a statistical check. Such procedures produced base line data which were then modified in light of various assumptions. Coefficients of forecasting efficiency are found in Table 2.9. The formula[1] is usually expressed as $E = 1 - \sqrt{1 - r^2}$.

Clearly, the revenue collected by local, state and federal governments is a function of not only the national but, to a certain degree, the world economies. For example, greatly increased oil prices for imported oil will have a tendency to slow down the growth rate in the Gross National Product and to increase slightly unemployment.[2] Unemployment is projected for the decade and a half ahead to be about six percent.[3] Output (real gross product) per man hour in the private economy increased at a compound average annual rate of slightly more than three percent. The projected rate for the future is estimated to be slightly below three percent.[4] Because personal income tax represents such a large percentage of revenue collected, the accuracy of the personal income projection is extremely important when total

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1 See H.S. Conrad and G.B. Martin, "The Index of Forecasting Efficiency," Journal of Experimental Education 4 (1935) pp. 231-244.

2 Ronald E. Kutscher, Monthly Labor Review, "Revised BLS Projections to 1980 and 1985: An Overview", March 1976, Volume 99, Number 3.

3 United States Department of Commerce, Area Economic Projections 1990, Bureau of Economic Analysis, Washington, D.C.

4 Charles T. Bowman and Terry H. Morlan, Monthly Labor Review, "Revised Projections of the U.S. Economy to 1980 and 1985," March 1976, Volume 99, Number 3.

TABLE 2.9

COEFFICIENTS OF FORECASTING EFFICIENCY FOR
VARIOUS UNITED STATES, ALL GOVERNMENTS REVENUE MEASURES

REVENUE MEASURE (1)	REGRESSION EQUATION COEFFICIENTS					
	STRAIGHT LINE		POLYNOMIAL		NATURAL LOGARITHM	
	Constant (2)	Current (3)	Constant (4)	Current (5)	Constant (6)	Current (7)
I. Total General Revenue Predicted From Itself	.8236	.6775	.8110	.9163*	.8260*	.8516
A. Individual Income Taxes	.7461	.6535	.7410	.8816*	.7624*	.8156
B. Corporation Taxes	.2083*	.5769	.1512	.6579*	.2077	.5710
C. Sales, Gross Receipts and Custom Taxes	.8432	.6950	.8418	.9051*	.8721*	.8859
D. Property Taxes	.8761	.7225	.8811*	.9105	.8245	.9452*
E. License and Other Taxes	.8010*	.7450	.7893	.8904	.7784	.9225*
F. Charges and Miscellaneous Revenues	.7768	.6088	.8783	.8904*	.8937*	.8735

*The asterisk indicates the projective formulas actually used to predict each revenue component.

general revenue is projected through the aggregation of its various predicted components.

Projected Individual Income Taxes - United States

In 1950, individual income taxes (current dollars) for all levels of government amounted to $16.53 billion. By 1975, the amount increased to $143.84 billion. The increase over this quarter century was at a compound annual rate of 9.43 percent. A compound annual growth rate of 8.80 percent is projected. Income Taxes are projected to rise from $143,840 million in 1975, to $234,102 million in 1980, and to $510,191 million in 1990. See Table 2.10. On a percapita basis, individual income taxes went from $108.99 in 1950 to $673.88 in 1975, reflecting a compound annual growth rate of 7.6 percent. See Table 2.11. Per capita individual income taxes are projected to rise to $1,050.87 in 1980, to $1,506.22 in 1985, and $2081.77 in 1990. The average annual growth rate is 7.8 percent which parallels its long term historic growth. The projected rate over the next half decade (1975 - 1980), however, is 9.3 percent. See Table 2.12.

In 1950, individual income taxes (in constant dollars) collected for all levels of government amounted to $16.53 billion. By 1975, two and a half decades later, individual income taxes collected (1950 constant dollars) amounted to $60.27 billion. Thus, despite the fact that the Purchasing Power of the Consumer Dollar dropped from $1.00 in 1950 to

TABLE 2.10

UNITED STATES PROJECTED REVENUES, ALL GOVERNMENTS, IN CURRENT DOLLARS
(In Millions)

YEAR (1)	TOTAL GENERAL REVENUE (2)	PERSONAL INCOME TAXES (3)	CORPORATION TAXES (4)	SALES, GROSS RECEIPTS TAXES (5)	PROPERTY TAXES (6)	OTHER TAXES INCLUDING LICENSES (7)	CHARGES & MISCELLANEOUS REVENUES (8)
1975 (ACTUAL)	$ 403,208	$143,840	$ 47,263	$ 70,905	$ 51,491	$18,151	$ 71,558
				PROJECTED			
1976	447,959	163,781	51,048	80,686	54,712	19,840	77,892
1977	488,398	179,504	54,637	88,053	59,091	21,267	85,846
1978	531,952	196,435	58,503	95,987	63,820	22,795	94,412
1979	578,757	214,619	62,654	104,508	68,928	24,435	103,613
1980	628,947	234,102	67,102	113,638	74,444	26,191	113,470
1981	682,665	254,928	71,857	123,397	80,402	28,074	124,007
1982	740,051	277,142	76,928	133,806	86,836	30,093	135,246
1983	801,253	300,789	82,326	144,887	93,786	32,256	147,209
1984	866,424	325,913	88,062	156,660	101,292	34,576	159,921
1985	935,712	352,559	94,145	169,147	109,398	37,061	173,402
1986	1,009,284	380,773	100,586	182,368	118,154	39,726	187,677
1987	1,087,295	410,598	107,395	196,344	127,610	42,582	202,766
1988	1,175,917	442,079	114,582	211,096	137,822	45,644	218,694
1989	1,257,326	475,262	122,158	226,646	148,852	48,925	234,483
1990	1,349,699	510,191	130,132	243,013	160,765	52,443	253,155

Note: See end of chapter for data sources.

TABLE 2.11

PER CAPITA TOTAL GENERAL REVENUES (CURRENT DOLLARS) AND ITS VARIOUS COMPONENTS
UNITED STATES, ALL GOVERNMENTS, 1950 - 1975

YEAR	TOTAL GENERAL REVENUE	PERSONAL INCOME TAXES	CORPORATION TAXES	SALES, GROSS RECEIPTS TAXES	PROPERTY TAXES	OTHER TAXES INCLUDING LICENSES	CHARGES & MISCELLANEOUS REVENUES
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1950	385.56	108.99	73.05	85.68	48.44	20.70	48.70
1951							
1952	568.53	184.25	140.63	99.96	55.12	23.79	64.78
1953	583.63	193.53	138.22	108.29	58.75	25.77	59.07
1954	590.21	188.86	134.73	108.64	61.37	26.58	70.03
1955	564.29	181.41	112.56	104.19	64.95	27.39	73.79
1956	624.55	201.57	130.11	114.51	70.22	31.0	77.14
1957	661.61	219.36	130.01	120.87	75.50	33.16	82.71
1958	648.84	210.48	121.68	121.74	81.04	32.65	81.25
1959	646.85	219.32	103.73	123.32	84.88	33.21	82.39
1960	725.68	239.88	125.97	135.85	91.14	35.61	97.23
1961	731.84	240.09	121.38	137.18	98.34	38.49	96.36
1962	766.30	261.58	117.48	144.88	102.53	38.83	101.00
1963	804.37	269.56	122.35	151.92	105.12	44.40	111.02
1964	839.93	274.27	131.61	159.57	110.99	46.18	117.31
1965	875.53	272.84	141.32	169.77	116.51	47.42	127.67
1966	961.76	307.39	163.95	172.19	125.95	51.20	141.08
1967	1,044.64	340.39	182.94	183.64	131.64	51.49	154.54
1968	1,087.37	380.43	156.02	196.06	138.83	54.91	161.12
1969	1,278.92	476.21	197.39	219.61	151.90	57.81	176.00
1970	1,329.96	494.06	178.48	237.30	166.21	60.58	193.33
1971	1,331.39	473.93	145.89	254.33	182.81	64.72	209.71
1972	1,481.76	526.57	175.16	275.74	201.74	77.83	224.72
1973	1,644.09	576.20	197.60	293.56	215.21	79.48	282.04
1974	1,810.83	653.31	210.63	314.43	225.12	85.10	322.24
1975	1,899.00	673.88	221.42	332.18	241.23	85.03	335.26

Note: All data are in millions of dollars. See end of chapter for data sources.

TABLE 2.12

UNITED STATES, ALL GOVERNMENTS, PROJECTED PER CAPITA REVENUE IN CURRENT DOLLARS
(In Millions)

YEAR (1)	TOTAL GENERAL REVENUE (2)	PERSONAL INCOME TAXES (3)	CORPORATION TAXES (4)	SALES, GROSS RECEIPTS TAXES (5)	PROPERTY TAXES (6)	OTHER TAXES INCLUDING LICENSES (7)	CHARGES & MISCELLANEOUS REVENUES (8)
1975 (ACTUAL)	1,899.00	673.88	221.42	332.18	241.23	85.03	335.26
				PROJECTED			
1976	2,082.81	761.51	237.35	375.15	254.39	92.25	362.16
1977	2,270.84	834.62	254.04	409.41	274.75	98.88	399.14
1978	2,432.58	898.28	267.53	438.94	291.84	104.24	431.75
1979	2,622.81	972.61	283.94	473.61	312.37	110.73	469.55
1980	2,823.31	1,050.87	301.22	510.12	334.18	117.57	509.35
1981	3,034.57	1,133.20	319.42	548.52	357.40	124.79	551.24
1982	3,257.17	1,219.78	338.58	588.92	382.19	132.45	595.25
1983	3,491.54	1,310.72	358.74	631.36	408.68	140.56	641.48
1984	3,738.20	1,406.16	379.94	675.91	437.03	149.18	689.98
1985	3,997.61	1,506.22	402.21	722.64	467.38	158.33	740.83
1986	4,270.38	1,611.09	425.59	771.62	499.92	168.08	794.08
1987	4,557.05	1,720.89	450.11	822.91	534.84	178.47	849.83
1988	4,883.19	1,835.81	475.82	876.61	572.33	189.54	933.08
1989	5,181.15	1,958.44	503.38	933.96	613.39	201.61	970.37
1990	5,507.29	2,081.77	530.99	991.59	655.98	213.99	1,032.97

Note: See end of chapter for data sources.

$0.62 in 1975, individual income taxes collected grew at a real compound annual growth rate of 5.31 percent. The projected compound annual growth rate for individual income taxes (in constant dollars) is 5.21 percent. See Table 2.13. This rate is slightly below its historic long term growth rate. The real growth in individual income taxes is projected to increase from $60.27 billion in 1975 to $129.08 in 1990.

Another method of examining the real growth of individual income taxes is to assess its impact upon population in terms of per capita data. In 1950, per capita individual income taxes (constant dollars) totalled $108.99, rising to $306.32 in 1970. See Table 2.14. Inflation rose faster than per capita current income taxes did so that by 1975 the figure decreased to $301.23. The rate of increase over the quarter century (1950 - 1975) investigated was 4.2 percent. The real growth in per capita individual income taxes is projected to go from $301.23 in 1975 to $526.88 in 1990, reflecting a 3.8 percent increase, its long term historic rate of 4.2 percent. See Table 2.15.

Projected Corporation Taxes
United States

In 1950, corporation taxes[1] (current dollars) for all levels of government amounted to $11.08 billion increasing to $47.26 billion in 1975. This increase amounted to a com-

[1] For a full discussion of basic concepts and termonology and of the classifications of revenue for corporation taxes, see, U.S. Bureau of the Census, Census of Governments, Historical Statistics on Governmental Finances and Employment.

TABLE 2.13

UNITED STATES, ALL GOVERNMENTS, PROJECTED REVENUE IN CONSTANT DOLLARS
(In Millions)

YEAR	TOTAL GENERAL REVENUE	PERSONAL INCOME TAXES	CORPORATION TAXES	SALES, GROSS RECEIPTS TAXES	PROPERTY TAXES	OTHER TAXES INCLUDING LICENSES	CHARGES & MISCELLANEOUS REVENUES
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1975 (ACTUAL)	180,234.1	64,296.5	21,126.6	31,694.5	23,016.5	8,113.5	31,986.4
				PROJECTED			
1976	186,350.9	68,132.5	21,236.1	33,565.4	22,760.2	8,253.4	32,403.5
1977	195,359.2	71,801.6	21,854.8	35,221.2	23,636.4	8,506.8	34,338.4
1978	204,801.5	75,627.5	22,523.7	36,955.1	24,570.7	8,776.1	36,348.6
1979	214,140.1	79,409.0	23,182.1	38,667.9	25,503.4	9,041.1	38,336.8
1980	223,276.2	83,106.2	23,821.2	40,337.9	26,427.6	9,297.8	40.285.4
1981	233,471.4	87,185.4	24,575.1	42,201.8	27,497.5	9,601.3	42,410.4
1982	244,216.8	91,456.9	25,386.2	44,156.1	28,655.9	9,930.7	44,631.2
1983	255,599.7	95,951.7	26,262.0	46,219.1	29.917.7	10,289.7	46,959.7
1984	267,725.0	100,707.1	27,211.2	48.407.9	31,299.2	10,684.6	49,415.1
1985	278,842.2	105,062.6	28,055.2	50,405.8	32,600.6	11,044.2	51,673.8
1986	290,673.8	109,662.6	28,968.8	52,522.1	34,028.4	11,441.1	54,050.9
1987	303,355.3	114,556.8	29,963.2	54,780.1	35,603.2	11,880.4	56,571.7
1988	317,497.6	119,361.3	30,937.1	56,995.9	37,211.9	12,323.9	60,667.4
1989	329,419.4	124,518.6	32,005.4	59,381.3	38,999.2	12,818.4	61,696.6
1990	341,473.9	129,078.3	32,923.4	61,482.3	40,673.6	13,268.1	64,048.2

Note: (For Constant Dollars, 1950 = 100)

TABLE 2.14

PER CAPITA TOTAL GENERAL REVENUES (CONSTANT DOLLARS, 1950 = 100) AND ITS VARIOUS COMPONENTS, UNITED STATES, ALL GOVERNMENTS, 1950 - 1975

YEAR	TOTAL GENERAL REVENUE	PERSONAL INCOME TAXES	CORPORATION TAXES	SALES, GROSS RECEIPTS TAXES	PROPERTY TAXES	OTHER TAXES INCLUDING LICENSES	CHARGES & MISCELLANEOUS REVENUES
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1950	385.6	109.1	73.1	85.7	48.4	20.7	48.7
1951							
1952	515.1	166.9	127.4	90.6	49.9	21.6	58.7
1953	524.7	174.1	124.3	97.4	52.8	23.2	53.1
1954	528.2	169.0	120.6	97.2	54.9	23.8	62.7
1955	507.3	163.1	101.2	93.7	58.4	24.6	66.3
1956	553.4	178.6	115.3	101.5	62.2	27.5	68.3
1957	565.7	187.6	111.2	103.3	64.6	28.4	70.7
1958	539.8	175.1	101.2	101.3	67.4	27.2	67.6
1959	533.7	180.9	85.6	101.7	70.0	27.4	68.1
1960	589.3	194.8	102.3	110.3	74.0	28.9	78.9
1961	588.4	193.0	97.6	110.3	79.1	30.9	77.5
1962	609.2	207.9	93.4	115.2	81.5	31.7	79.5
1963	632.2	211.9	96.2	119.4	82.6	34.9	87.2
1964	660.2	215.6	103.5	125.4	87.2	36.3	92.2
1965	667.2	207.9	107.7	129.4	88.8	36.1	97.3
1966	712.7	227.8	121.5	127.6	93.3	37.9	104.5
1967	752.1	245.1	131.7	132.2	94.8	37.1	111.3
1968	752.5	263.3	107.9	135.7	96.1	38.0	111.5
1969	839.1	312.4	129.5	144.1	99.7	37.9	115.4
1970	824.6	306.3	110.7	147.1	103.1	37.6	119.8
1971	790.8	281.5	86.7	151.1	108.6	38.4	124.6
1972	853.5	303.3	100.9	158.8	116.2	44.8	129.4
1973	891.1	312.3	107.1	159.1	116.6	43.1	152.9
1974	883.7	318.8	102.8	153.4	109.9	41.5	157.2
1975	844.4	694.5	301.2	98.9	148.5	38.0	149.9

Note: All data is in millions of dollars. See end of chapter for data sources.

pound annual growth rate of 6.23 percent. An analysis of per capita data reveals that corporation taxes increased from $73.05 in 1950 to $221.42 in 1975, reflecting a growth rate of 4.5 percent. Corporation taxes are projected to increase from $47.26 billion in 1975, to $67.10 billion in 1980 and, to $130.13 billion in 1990. Over the next five years (1975 - 1980) corporation taxes are projected to increase at a 7.3 percent average annual rate, declining to 6.8 percent over the following decade (1980 - 1990). On a per capita basis, the projected figure rises from $221.42 in 1975, to $301.22 in 1980, and to $530.99 in 1990. Per capita corporation taxes are projected to rise over the next half decade at a 6.3 percent rate and at a 5.8 percent rate over the subsequent decade.

Corporation taxes (1950 dollars) totalled $11.08 billion in 1950 for all levels of government. By 1975, corporation taxes increased to $21.13 billion, growing at a real compound annual rate of 4.40 percent. Corporation taxes grew in a most haphazard manner, reflecting no doubt the ups and downs of the national economy, policy changes at the various levels of government with regard to the taxation of corporation, and the confounding factor of uneven inflation rates. This is evidenced by extreme differences in percentage yearly growth rates. See Figure 2.15. Corporation taxes are projected to increase from $21.13 billion in 1975, to $23.82 billion in 1980, and to $32.92 billion in 1990. Over the next half decade, the real growth in corporation taxes is projected to increase at an average annual rate of 2.4 percent. This is at

half its long term historic growth rate. From 1980 - 1990, the real growth rate is projected to be 3.3 percent, reflecting more a decreasing rate of inflation than truly large rate increases in the yield of corporation taxes. Per capita corporation taxes were $73.05 in 1950, reaching a high of $129.49 in 1969. From this point the trend has been downward to $98.97 in 1975. Over the two and a half decades (1950 - 1975), the real growth rate was 1.2 percent. The projected rate for 1975 to 1990 is 4.3 percent, indicating a heavier tax burden on corporations than has occurred in the past. Per capita corporation taxes are projected to be $188.50 (constant dollars) by 1990.

Projected Sales, Gross Receipts and Custom Taxes - United States

In 1950, sales, gross receipts, and custom taxes[1] (current dollars) amounted to $12.99 billion for all levels of local, state, and federal governments. The figure increased to $70.90 billion, or a compound annual growth rate of 7.32 percent by 1975. Over the past half decade, sales, gross receipts, and custom taxes increased at an average annual rate of 7.8 percent. On a per capita basis, these taxes increased from $85.68 in 1950 and to $332.18 in 1975 for an average annual growth rate of 5.6 percent.

Sales, gross receipts and custom taxes are projected

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[1] For a full discussion of basic concepts and termonology and of the classifications of sales, gross receipts, and custom taxes, see, U.S. Bureau of the Census, Census of Governments, Historical Statistics on Governmental Finances and Employment.

to increase from $70.90 billion in 1975, to $113.64 billion in 1980, and to $243.01 billion in 1990. These increases reflect a compound annual growth rate of 9.9 percent from 1975 to 1980 and a rate of 7.9 percent over the subsequent decade.

Sales, gross receipts and custom taxes increased from $12.99 billion in 1950 to $33.69 billion in 1975 in terms of real growth. The real compound annual growth rate over this period was 3.6 percent. These taxes are projected to increase to $40.34 billion in 1980 and to $61.48 billion in 1990. Sales, gross receipts, and custom taxes (in constant dollars) are projected to rise over the next half decade at its historic growth rate of 3.7 percent, but increase more rapidly over the subsequent decade (1980 - 1990) at an average annual rate of 4.3 percent. On a per capita real growth basis, these taxes increased over the 1950 - 1975 decade at a compound annual growth rate of 2.2 percent from $85.68 in 1950 to $148.48 in 1975. The real per capita growth from 1975 - 1990 is projected to increase at 3.6 percent because of the projected slowdown in inflation.

Projected Property Taxes
United States

In 1950, property taxes[1] (current dollars) raised by local, state, and federal governments amounted to $7.34 billion

[1] For a full discussion of basic concepts and termonology and of the classifications of property taxes, see, U.S. Bureau of the Census, Census of Governments, Historical Statistics on Governmental Finances and Employment.

and increased to $51.49 billion in 1975. This represents a compound annual growth rate of 8.44 percent over this past quarter century. Despite inflation, property taxes increased at an 8.6 percent average annual growth rate over the past half decade (1970 - 1975). Although the projected rate over the next decade is somewhat lower than the past half decade, 7.9 percent is nevertheless a relatively high rate. Property taxes are projected to increase from $51.49 billion in 1975, to $74.44 billion in 1980, and to $160.77 billion in 1990 at this rate. It appears almost impossible to impose such a large burden on other forms of taxation if the property tax is abolished.

An analysis of the real growth in property taxes (constant dollars) showed that property taxes from all levels of government amounted to $7.35 billion (constant dollars) in 1950. By 1975, the figure increased to $23.02 billion. This increase produced a real compound annual growth rate in constant dollars of 4.67 percent. The rate of increase over the next half decade is projected to be (constant dollars) 2.8 percent because of inflation and general resistance to rising property taxes. Over the next decade the rate, however, is projected to increase to 3.9 percent. Property taxes (constant dollars) are projected to increase to $26.43 billion in 1980 and to $40.67 billion in 1990 with these increases.

Projected License and Other Taxes - United States

In 1950, the revenue resulting from licenses and

other taxes[1] (current dollars) amounted to $3.14 billion. Local, state, and federal governments obtained $18.15 billion from these taxes a quarter century later. The actual compounded annual growth rate for this period was 7.58 percent. The rate of increase is projected to be about the same over the next decade and a half, 7.3 percent. Thus, these taxes are projected to increase from $18.15 billion in 1975, to $26.19 billion in 1980, and to $52.44 billion in 1990. On a per capita basis, these taxes increased from $20.70 in 1950 to $85.03 in 1975, reflecting a 3.8 percent growth rate. These revenues are projected to increase to $117.57 in 1980 and to $213.99 in 1990.

Licenses and other taxes for all levels of government amounted to $3.14 billion (1950 dollars) with respect to real growth. These taxes increased to $8.11 billion in 1975 for a long term historic compound annual growth rate of 3.9 percent. The projected real growth rate of 1.1 percent is considerably less. These revenues are projected to increase to $9.30 billion in 1980 and to $13.27 billion in 1990.

Projected Miscellaneous Revenues - United States

The last component of general revenue consisted of various charges and miscellaneous funds[2] (current dollars).

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[1] For a full discussion of basic concepts and termonology and of the classification of licenses and other taxes, see, U.S. Bureau of the Census, Census of Governments, Historical Statistics on Governmental Finances and Employment.

[2] For a full discussion of basic concepts and termonology and of the classification of miscellaneous revenues, see, U.S. Bureau of the Census, Census of Governments, Historical Statistics on Governmental Finances and Employment.

This myriad of revenue raised by local, state, and federal governments amounted to $7.38 billion in 1950 and increased to $71.55 billion in 1975 at a compound annual growth rate of 9.92 percent. Miscellaneous revenues are projected to increase at an average annual growth rate of 8.8 percent from 1975 to 1990. Miscellaneous revenues then would increase to $113.47 billion in 1980 and to $253.16 billion in 1990. On a per capita basis, miscellaneous revenue increased from $48.70 in 1950 to $335.26 in 1975. The per capita growth rate for this period was 8.0 percent. A decreasing average annual growth rate is projected for each of the next three half decades; 8.7 percent, 1975 - 1980; 7.8 percent, 1980 - 1985; and 6.9 percent, 1985 - 1990.

Miscellaneous revenue for all local, state, and federal governments increased in constant dollars from $7.67 billion in 1950 to $81.62 billion in 1975 for a long term historic growth rate of 6.0 percent. Miscellaneous revenue are projected to increase over the next decade and a half at a slightly higher rate of real growth. Miscellaneous revenue are projected to increase from $40.28 billion in 1980 to $64.05 billion in 1990.

Projected Total General
Revenue - United States

Two approaches were utilized to project total general revenue for the United States. The first involved the projection of revenue from the measure itself and the disaggregation of total general revenue into its component parts. The second

involved the projection of each component and the aggregation of the various components into total general revenue. Both procedures obtained projected base line data. As was typical in this study, four different methods were tested to assess equations having the highest forecasting efficiency coefficients. These methods involved straight line regression, polynomial regression, natural logarithmic regression, multiple order regression, and Fourier analysis regression.

Although the assumptions utilized to modify the base line data were enumerated previously, it would be most helpful to review what some of those assumptions were. Under each specific revenue component, detailed assumptions were enumerated. Some, but not all of the detailed, specific assumptions are also reviewed here. The underlying assumptions worth repeating are as follows: (1) there will be no major wars or depressions; (2) there will be no major changes in tax rates or tax structures (all such changes will be evolutionary rather than revolutionary); (3) federal revenue sharing with the states will continue; (4) unemployment will progress from 8.5 percent in 1975 to 7.8 percent in 1976; 6.8 percent in 1977; 5.8 percent in 1978; 5.1 percent in 1979; 4.7 percent in 1980; decreasing slightly each year until the level of 4.0 percent is reached in 1985, continuing into 1990; (5) the rate of productivity will increase at about 2.2 percent per year until 1980 and thence at a 2.6 percent level more consistent with its long term historic growth rate; (6) inflation as measured by the Consumer Price Index will increase at a slower rate than the

previous five years -- approximately 4.5 percent from 1975 - 1980, 4.2 percent from 1980 - 1985, and 4.0 percent from 1985 - 1990; (7) population in the United States will increase in accordance with Series II of the United States Census Bureau, reflecting an average annual growth rate of 9.25 percent from 1975 to 1990; (8) the growth of the population will be conditioned by a decline in fertility rates as indicated in Table 2.1; (9) the growth in output can be achieved without ecological disaster or serious deterioration, although diversion of resources for pollution control will cause changes in the industrial mix of output; (10) the Gross National Product will increase at a real growth rate (1950 constant dollars) of 3.9 percent to 1980, 3.8 percent to 1985, and 3.7 percent to 1990; and (11) personal income[1] will increase in accordance with its relationship between constant dollar personal income and constant dollar gross national product. The estimates of future economic activity in this report reflect baseline projections. These baseline projections are a best estimate of what can be expected to materialize if there are no policy or program changes of an unusual and unforeseen nature or magnitude in the factors which determined past trends. Of course, certain of the factors have been changing over time and will continue to do so in the future. The projections are in no sense a goal, an assigned share, or a constraint on economic activity.

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[1] See, "Population and Economic Activity in the United States and Standard Metropolitan Statistical Areas, Historical and Projected 1950 - 2020", Environmental Protection Agency, U.S. Dept. of Housing and Urban Development, Washington, D.C., July, 1972.

Within the framework of these general and specific assumptions regarding the national economy, total general revenues for all governmental levels in the United States are projected to increase as enumerated in Table 2.10. Total general revenue for all governmental levels is projected to increase from $403.21 billion in 1975 to $628.95 billion in 1980. Over this half decade the projected average annual increase is 9.8 percent which is above its long term historic rate of 8.0 percent. From 1980 - 1985, the growth in total general revenue is projected to lessen somewhat to 8.4 percent, closer to its historic rate. Total general revenue will increase to $935.71 billion in 1985. For the last half decade of the projection period, 1985 - 1990, total general revenue is projected to increase to $1,349.70 billion, reflecting a 7.6 percent growth rate.

An analysis of the impact of total general revenue collected on the population of the United States reveals that the per capita figure for 1975 was $1,899. Over the past half decade, 1970 - 1975, per capita general revenues increased at an average annual rate of 7.4 percent compared to 6.6 percent over the past quarter century. We project per capita total general revenue over the 1975 - 1990 period to increase in accordance with its compound annual growth rate of the past five years.

At this rate of growth, per capita general revenues are projected to increase from $1,899 in 1975, to $2,823 in 1980, to $3,977 in 1985, and to $5,507 in 1990.

Inflation, however, plays an important role in what the general revenue dollar will purchase. While the rate of inflation has been projected to amelcorate the erosive effects of the early seventies, its effect will still be substantial in the decade ahead. In 1975 inflation, as measured by the Purchasing Power of the Consumer Dollar (1950 = 100), eroded $222.98 billion from total general revenue. Total general revenue is projected to increase to $223.28 billion (1950 constant dollars) in 1980. This reflects a compound average annual real growth rate of 4.4 percent. This is higher than its long term historic growth rate of 3.2 percent. Total general revenue is projected to increase to $278.84 billion in 1985 and to $341.47 billion in 1990. Per capita total general revenues in constant dollars increased at a 3.2 percent real growth rate from 1950 to 1975. A similar rate of real growth is projected from 1975 to 1990. Per capita constant dollar revenues are projected to increase to $1,002 in 1980, to $1,119 in 1985, and to $1,393 in 1990. As can be computed from these real dollar increases, the rate of real growth in general revenues is 3.5 percent from 1975 - 1980, 2.2 percent from 1980 - 1985, and 4.5 percent from 1985 - 1990. This jump in real growth occurs principally from a projected decrease in the rate of inflation rather than from a decrease in population or large increases in general revenue.

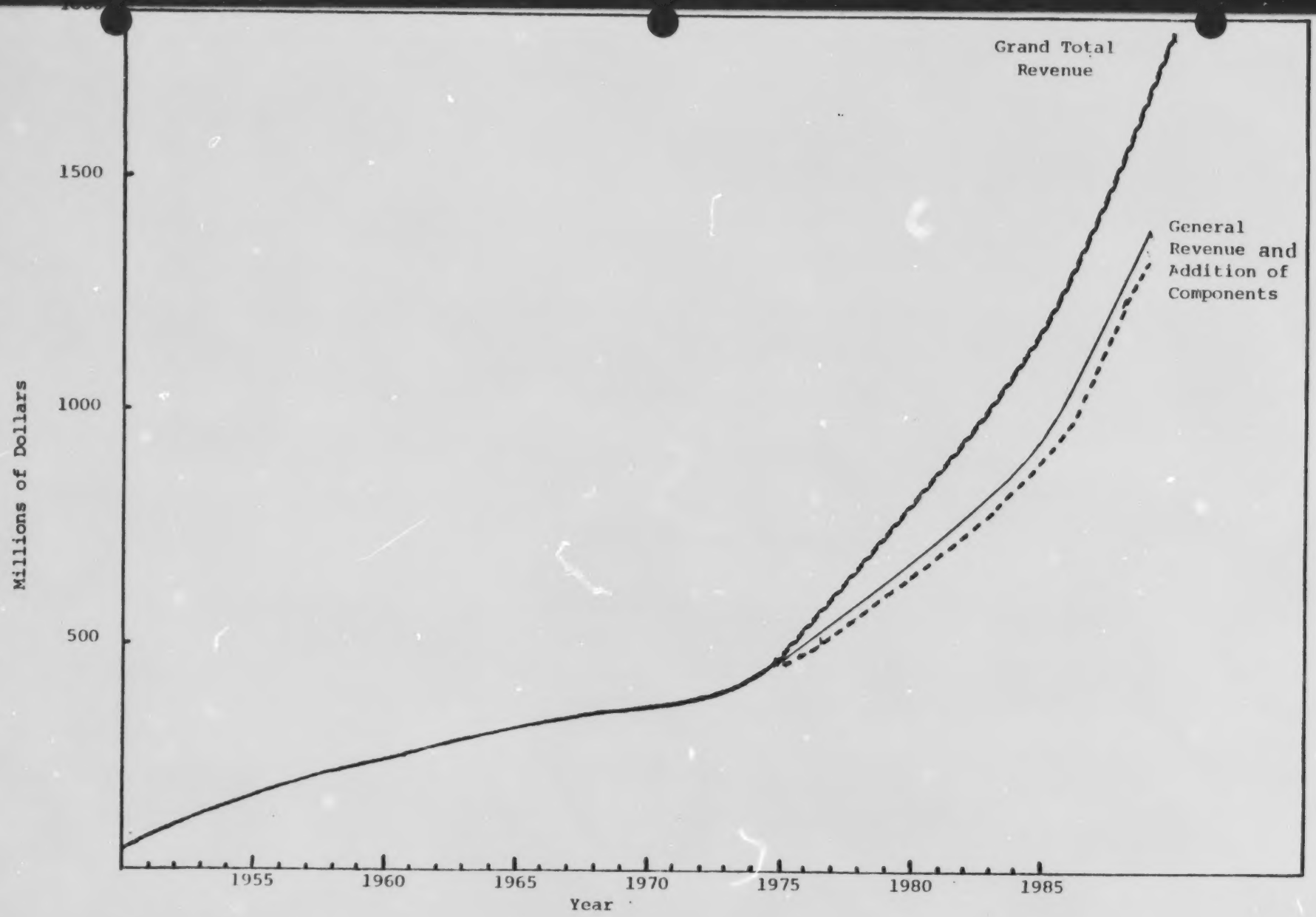

Figure 2.21. Actual and Predicted Values for United States Grand Total Revenue, Total United States General Revenue by Itself and Best Predictive Values of its Components.

TABLE FOOTNOTES

CHAPTER 2

Table Number	Source
2.1	(a) U.S. Population and Live Births, U.S. Bureau of the Census. "Population Estimates and Projections." Series P-25; No. 601, 493, and 541, Series II Population Projections. (b) New York Population and Live Births, New York Health Department, Office of Biostatistics. 1960-1975. New York State Economic Development Board, Projections, January, 1976. (c) From 1976 to 1990, New York Live Births and Birth Rates were estimated by staff members of Section 842, PL 83-80.
2.2	United States Department of Labor, Handbook of Labor Statistics 1976, Bureau of Labor Statistics, p. 241 and p. 261.
2.3	United States Bureau of the Census, 1902-1967, Census of Governments, 1967, Vol. 6, No. 5, Historical Statistics of Governmental Finances and Employment; 1968-1970; Governmental Finances in 1970-1971; Governmental Finances in 1971-1972; Governmental Finances in 1972-1973; Governmental Finances in 1972-1973; Governmental Finances in 1973-1974; Governmental Finances in 1974-1975.
2.4	See data source, Table 2.3.
2.5	See data source, Table 2.3.
2.6	See data source, Table 2.2.
2.7	See data source, Table 2.2.
2.10	(a) See data source, Table 2.3. (b) From 1976 to 1990, United States Revenue were estimated by staff members of section 842, PL 83-80.
2.11	(a) See data sources, Tables 2.1, 2.3. (b) From 1976 to 1990, United States Revenue were estimated by staff members of Section 842, PL 83-80.
2.12	(a) See data sources, Tables 2.1, 2.3. (b) From 1976 to 1990, United States Revenue were estimated by staff members of Section 842, PL 83-80.
2.13	(a) See data sources, Tables 2.2, 2.3.

TABLE FOOTNOTES (CONTINUED)

Table Number	Source
	(b) From 1976 to 1990, United States Revenue were estimated by staff members of Section 842, PL 83-80.
2.14	(a) See data sources, Tables 2.1, 2.2, and 2.3. (b) From 1976 to 1990, United States Revenue were estimated by staff members of Section 842, PL 83-80.

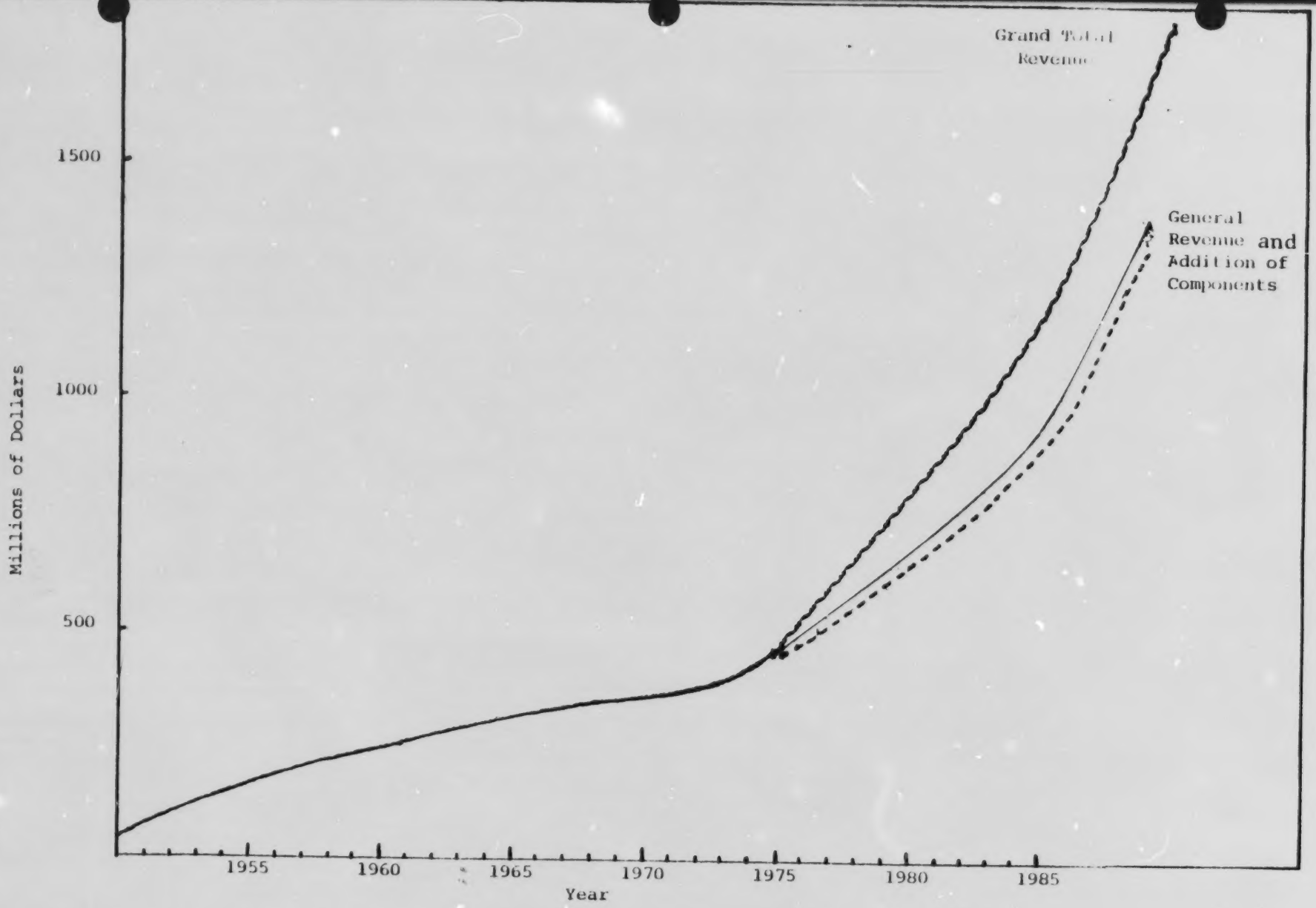

Figure 2.21. Actual and Predicted Values for United States Grand Total Revenue, Total United States General Revenue by Itself and Best Predictive Values of its Components.

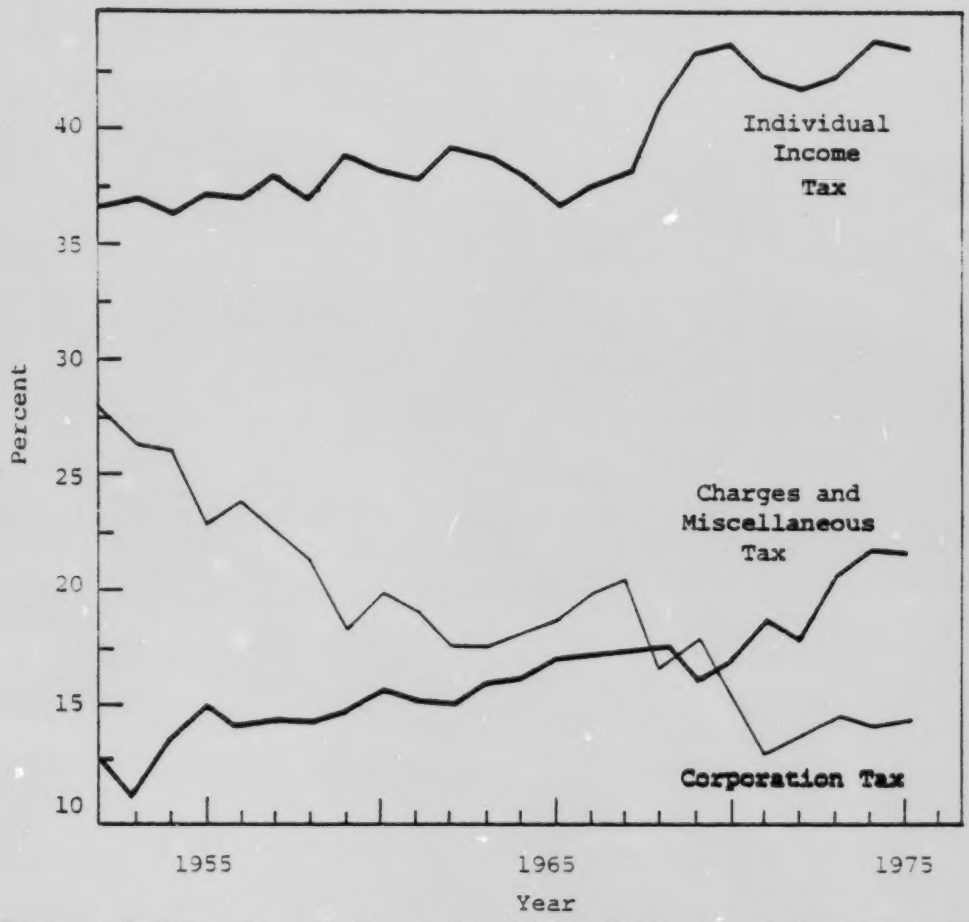

Figure 2.16. Trend Data for U.S. Individual Income; Charges and Miscellaneous; and Corporation Taxes as a Percent of Total United States General Revenue.

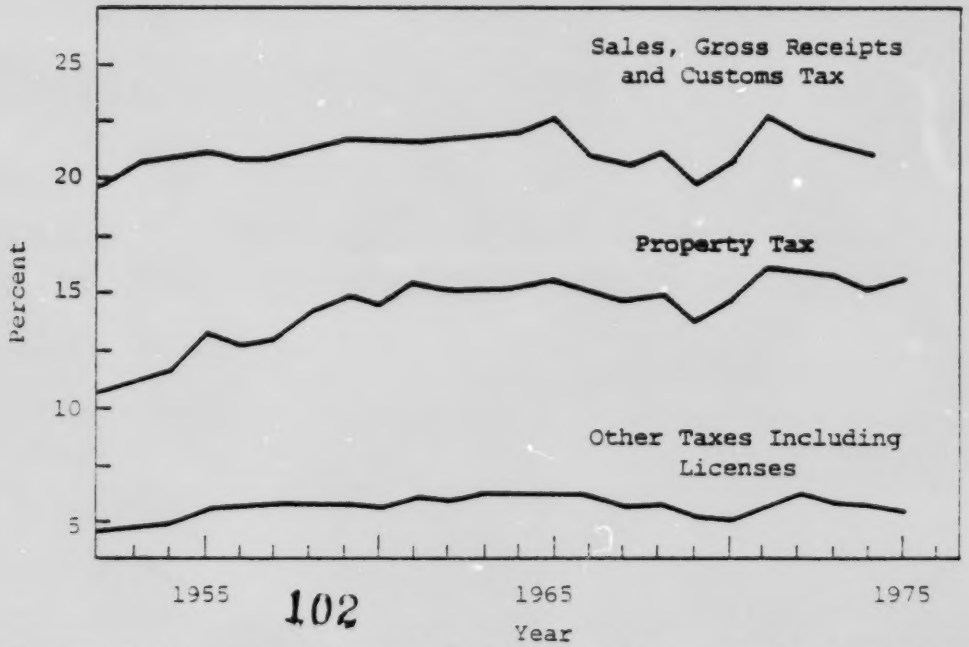

Figure 2.17. Trend Data for U.S. Sales, Gross Receipts and Customs; Property; and Other Taxes Including Licenses as a Percent of Total United States General Revenue.

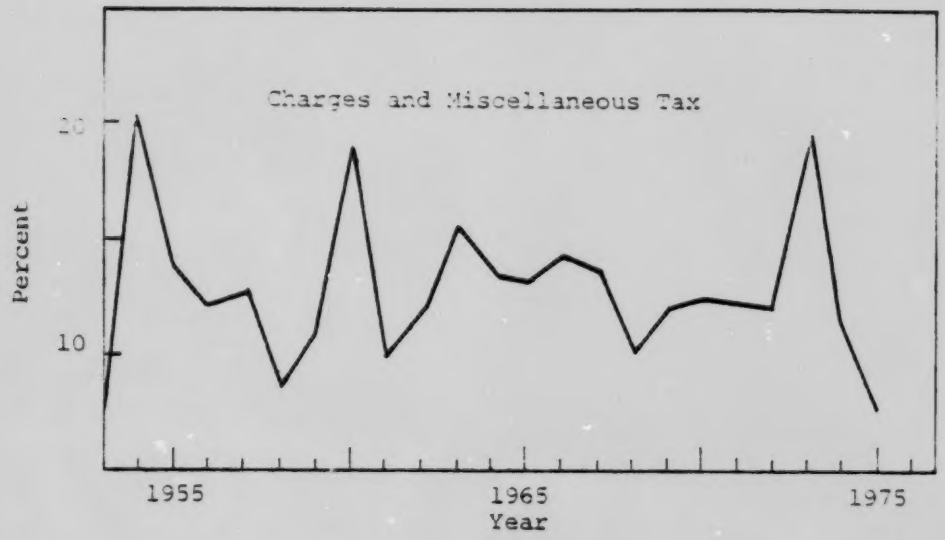

Figure 2.14. Trend Data for United States Charges and Miscellaneous Tax Yearly Growth Rates in Current Dollars.

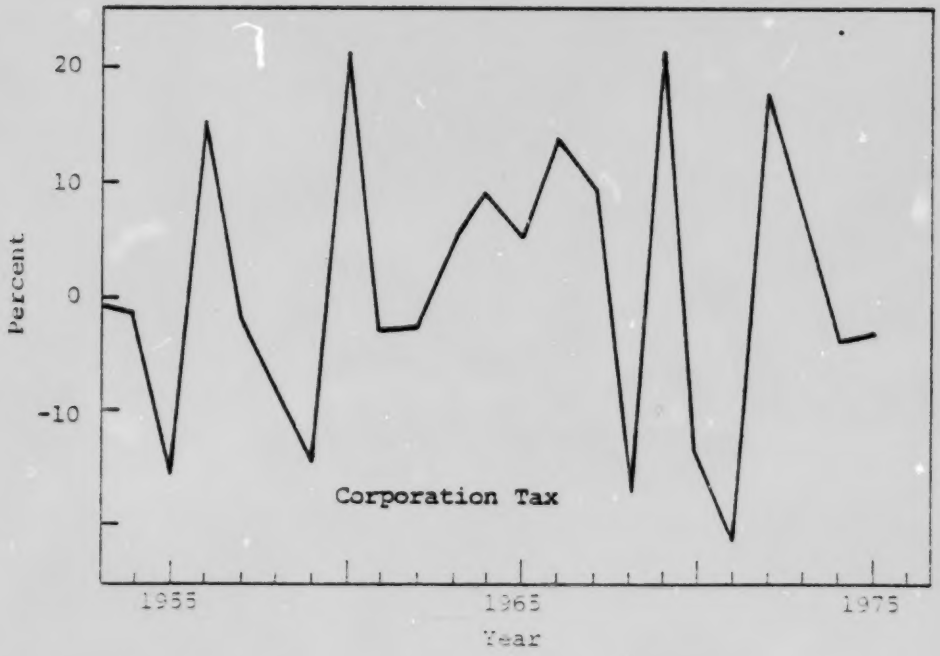

Figure 2.15. Trend Data for United States Corporation Tax Yearly Growth Rates in Current Dollars.

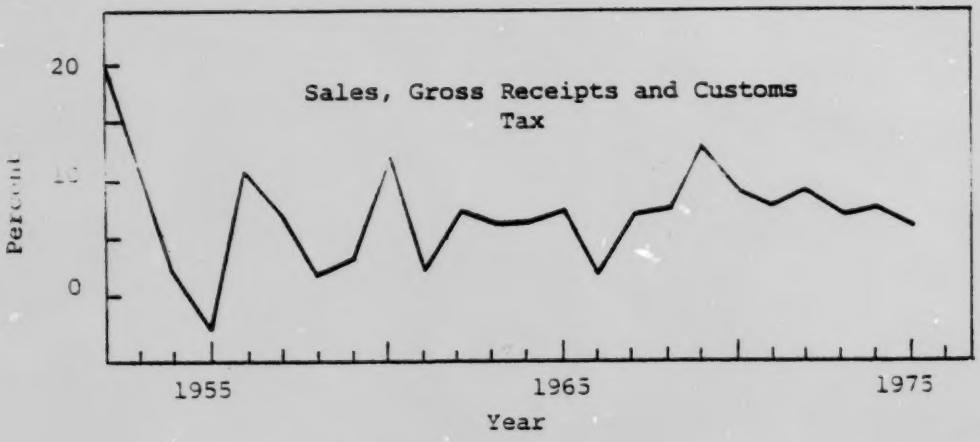

Figure 2.11 Trend Data for United States Sales, Gross Receipts and Customs Tax Yearly Growth Rates in Current Dollars

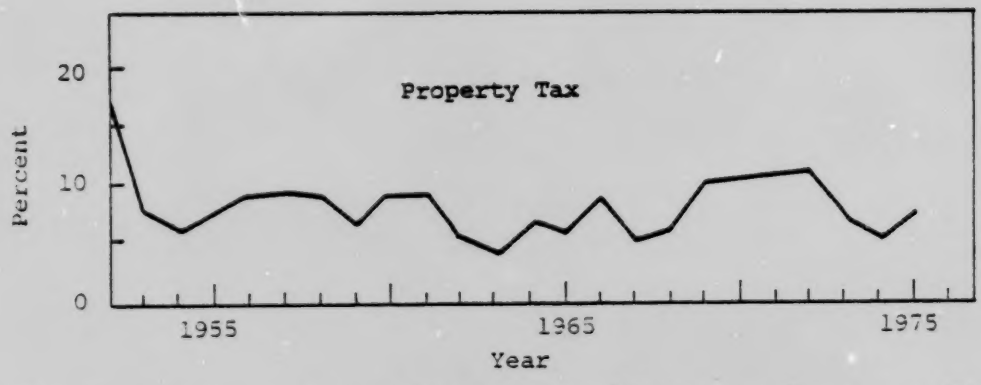

Figure 2.12. Trend Data for United States Property Tax Yearly Growth Rates in Current Dollars.

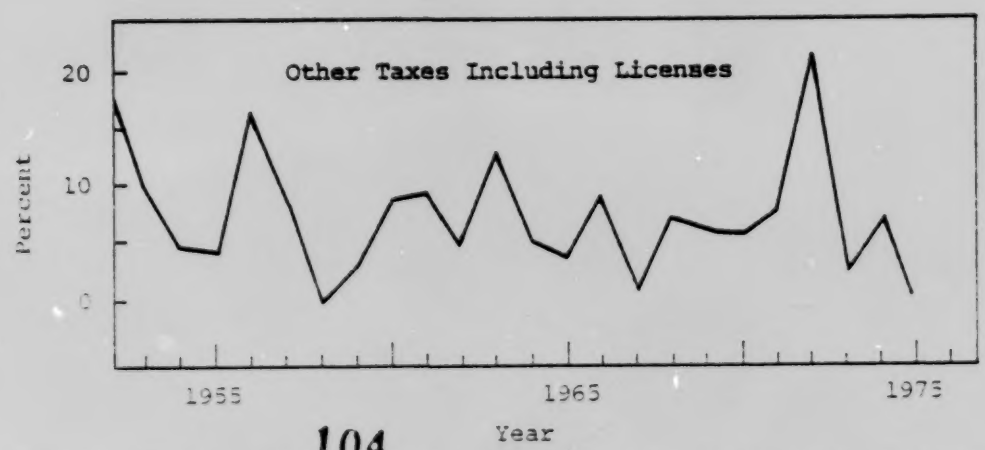

Figure 2.13. Trend Data for United States Other Taxes Including Licenses Yearly Growth Rates in Current Dollars.

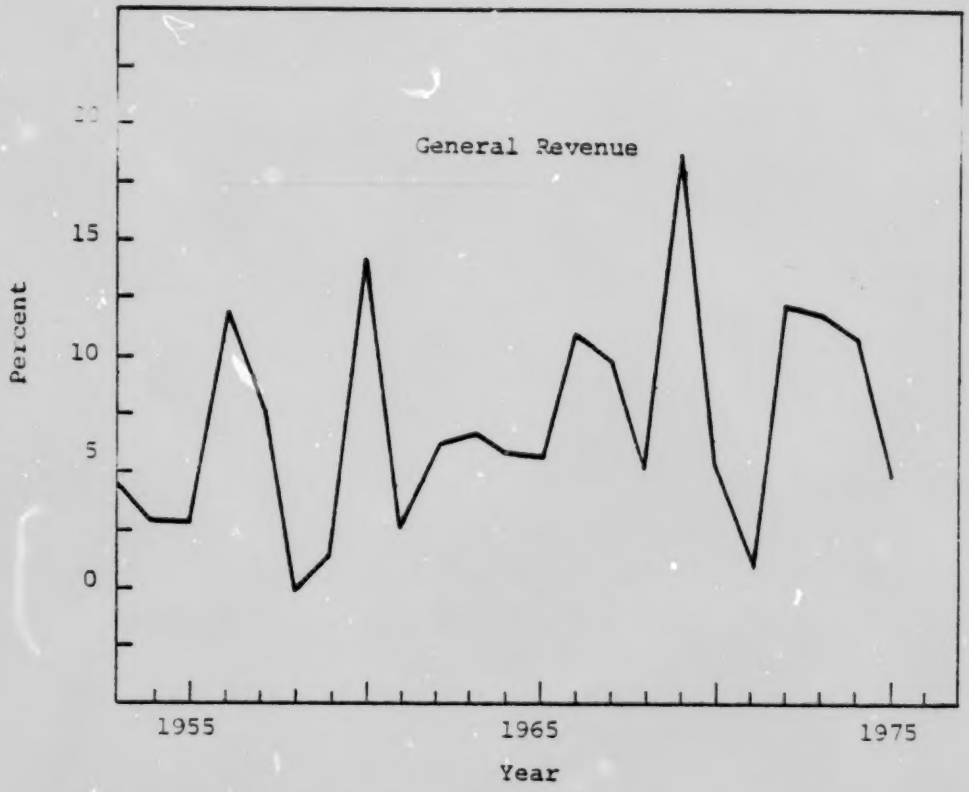

Figure 2.9. Trend Data for United States General Revenue Yearly Growth in Current Dollars.

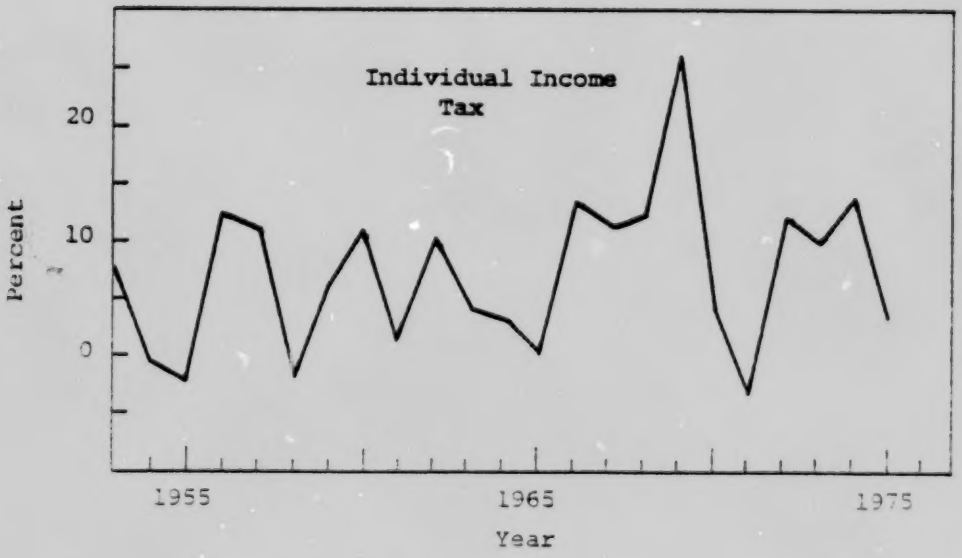

Figure 2.10. Trend Data for United States Individual Income Tax Yearly Growth in Current Dollars.

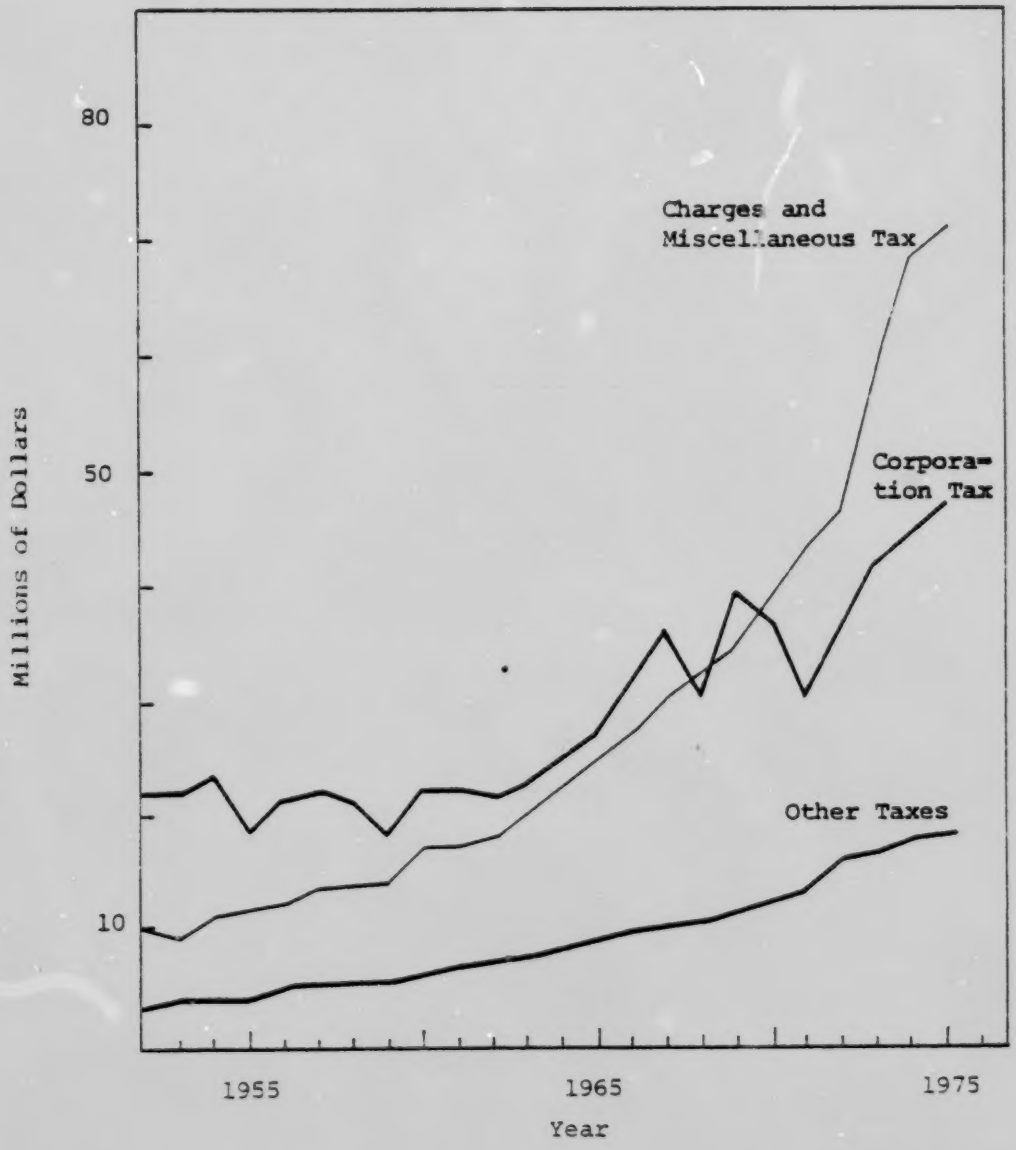

Figure 2.8. Trend Data for United States Charges and Miscellaneous Tax; Corporation Tax; and Other Taxes in Current Dollars.

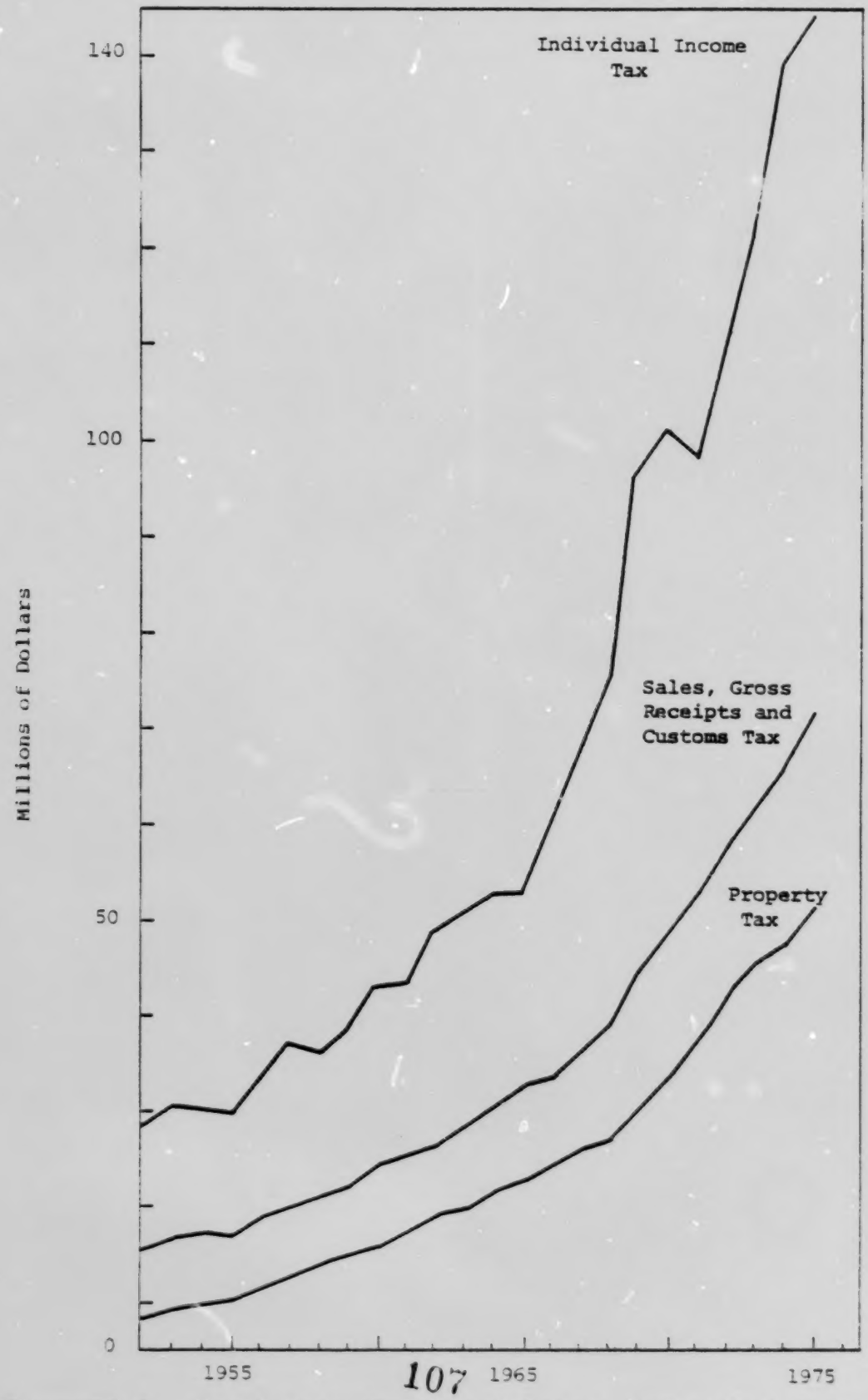

Figure 2.7. Trend Data for United States Individual Income Tax; Sales, Gross Receipts and Customs Tax; and Property Tax In Current Dollars

CHAPTER 3

ACTUAL AND PROJECTED EXPENDITURES FOR FEDERAL, STATE, AND LOCAL GOVERNMENTS

Chapter 3 discusses actual expenditures over the past quarter century by selected expenditure categories. Expenditures are detailed both in current and constant dollars. The selected categories are expenditures for education, national defense, highways, public welfare, natural resources, general debt, etc. Such expenditures reflect monetary outlays for all levels of federal, state, and local governments. Chapter 3 also contains data on projections for expenditures utilizing several different projective, statistical techniques both in current and constant dollars. Various data are graphically displayed to illustrate and illuminate the detailed discussion.

THE NATIONAL EXPENDITURE SETTING

Total expenditures for federal, state and local governments encompassed a wide variety of purposes. Expenditures have been classified by character, by object, and by function. The terms character and object refer to the general nature of governmental spending -- whether it represents a payment to another government, for current operation, capital outlay, subsidies, interest on debt, insurance benefits, or repayments

Only general expenditures are discussed herein. The functional classifications of general expenditures reflect services provided by governments for such purposes as education, national defense, highways, public welfare, natural resources, general debt, and all other purposes. Under all other purposes as postal service, hospitals, health, police, fire protection, sanitation, parks and recreation, housing and urban renewal, veterans services, financial administration and services, air and water transportation, utility and liquor store expenditures are subsumed. Insurance trust expenditures were not included under general expenditures. No projections were made for objects of expenditure such as wages and salaries, materials and supplies, fringe benefits, etc.

In 1950, total general expenditures for all levels of government totalled $60.70 billion, increasing to $128.60 billion in 1960 -- more than a two-fold increase. Over the subsequent decade, general expenditures again doubled to $275.02 billion in 1970. Over the next half decade, general expenditures increased to $432.55 billion, reflecting a long term historic average annual growth rate of 8.2 percent. The rate over the past half decade was slightly higher, 9.5 percent. These data are enumerated in Table 3.1.

On a per capita basis, general expenditures for all governments amounted to $400 in 1950, rising to $714 in 1960 -- a 1.8 fold increase. Over the next decade, per capita general expenditures increased to $1,342 in 1970 -- again increasing at the same rate as the previous decade, 1.9 fold. By 1975,

TABLE 3.1

TOTAL GENERAL EXPENDITURES (CURRENT DOLLARS) AND ITS VARIOUS COMPONENTS, UNITED STATES, ALL GOVERNMENTS, 1950 - 1975

YEAR	TOTAL GENERAL EXPENDITURES	NATIONAL DEFENSE	EDUCATION	HIGHWAYS	PUBLIC WELFARE	NATURAL RESOURCES	GENERAL DEBT	OTHER
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1950	60,701	18,355	9,647	3,872	2,964	5,005	4,862	15,996
1951								
1952	91,291	48,187	9,598	4,714	2,830	3,252	4,814	17,896
1953	100,733	53,583	10,117	5,053	2,956	4,816	5,477	18,731
1954	100,365	49,265	11,196	5,586	3,103	6,377	5,515	19,323
1955	97,828	43,472	12,710	6,520	3,210	6,338	5,684	20,194
1956	102,156	43,388	14,160	7,035	3,184	6,630	6,297	21,462
1957	109,765	47,500	15,098	7,931	3,534	6,137	6,603	22,962
1958	115,714	47,626	16,836	8,702	3,866	6,160	7,360	25,164
1959	124,217	49,688	18,119	9,726	4,193	7,966	6,959	27,566
1960	128,600	48,922	19,404	9,565	4,462	7,087	9,332	29,828
1961	139,161	51,210	21,214	9,995	4,779	9,756	9,309	32,898
1962	149,159	55,172	22,814	10,508	5,147	10,468	9,173	35,877
1963	156,002	56,386	24,480	11,315	5,538	9,511	9,846	40,156
1964	166,088	57,326	27,342	11,828	5,880	10,042	10,649	43,021
1965	173,613	55,810	29,613	12,348	6,420	10,990	11,403	47,002
1966	189,406	60,832	34,837	12,895	6,965	10,301	12,278	51,298
1967	216,888	74,638	40,214	14,033	9,592	10,145	13,406	54,860
1968	236,348	83,874	43,614	14,654	11,245	9,200	14,873	58,888
1969	255,924	84,496	50,377	15,738	14,730	10,024	16,992	63,567
1970	275,017	84,253	55,771	16,746	17,517	11,469	18,411	70,850
1971	301,096	80,910	64,042	18,396	20,446	13,740	21,688	81,874
1972	324,357	81,719	69,449	19,250	23,558	14,559	23,077	92,745
1973	348,416	83,004	74,890	18,886	26,967	16,710	25,117	102,842
1974	377,177	87,045	81,653	20,189	31,031	15,757	30,116	111,386
1975	432,553	95,760	95,011	22,840	39,402	16,184	33,002	130,354

Note: See end of chapter for data sources.

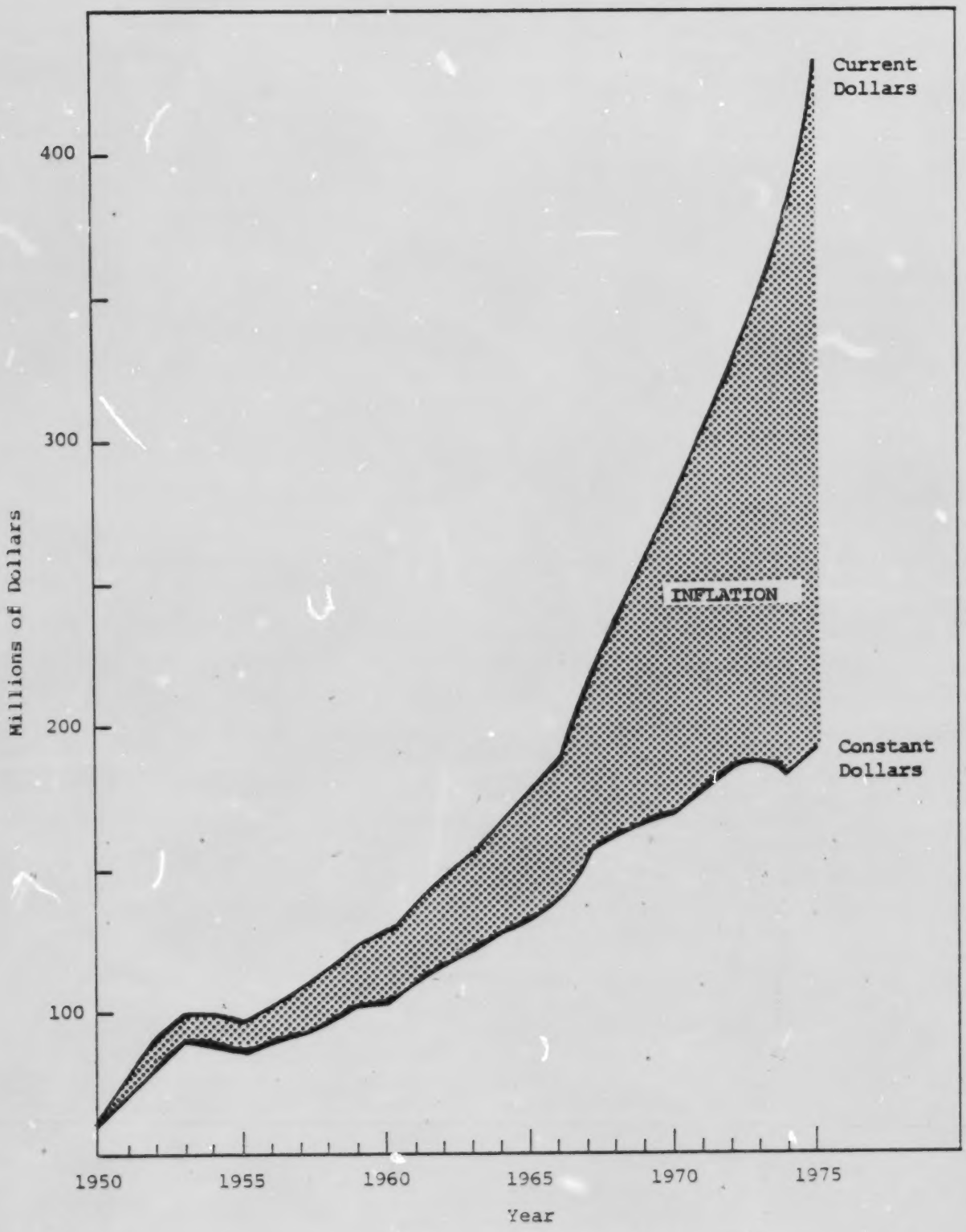

Figure 3.1. Trend Data for United States Total General Expenditures in Current and Constant Dollars (1950 = 100).

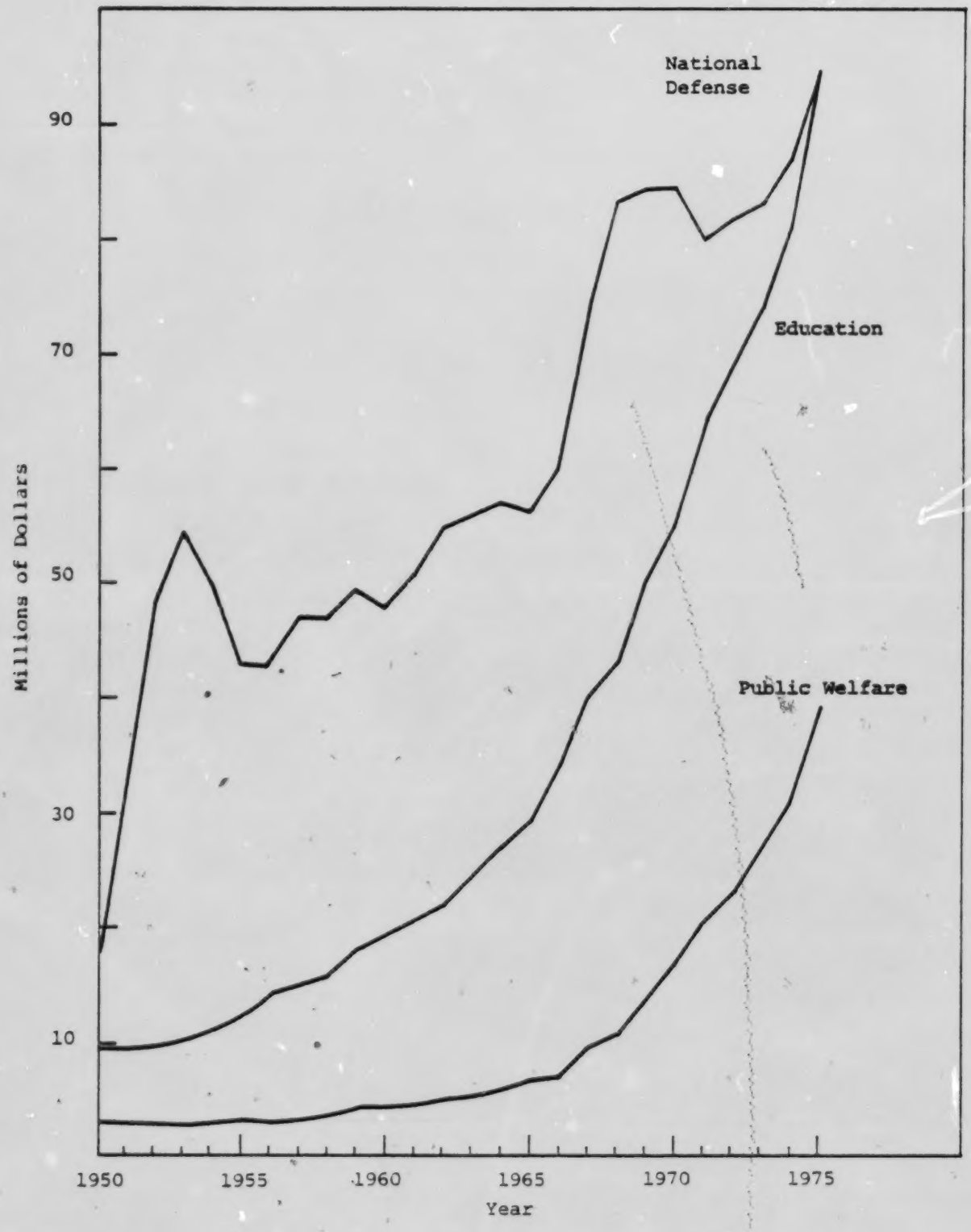

Figure 3.2. Trend Data for United States National Defense, Education, and Public Welfare Expenditures in Current Dollars.

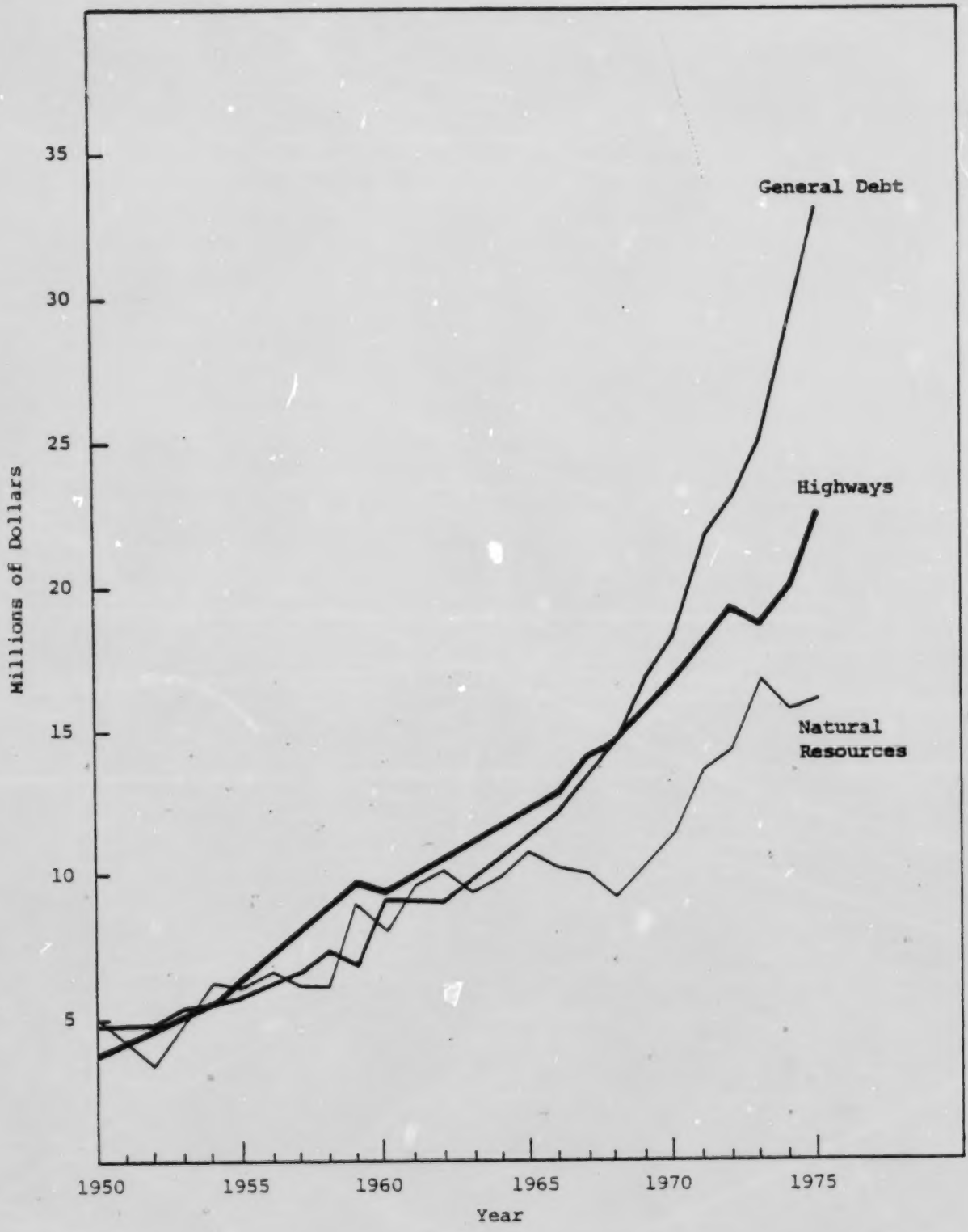

Figure 3.3. Trend Data for United States Highways, Natural Resources, and General Debt Expenditures in Current Dollars.

per capita general expenditures rose to $2,026 -- a 1.5 fold increase over the past half decade. The average annual growth was 6.7 percent over the quarter century involved here, whereas it was 8.6 percent over the past five years the rate was 8.6 percent. See Table 3.2.

Expressing expenditures in constant dollars reflects how well appropriations for general expenditures met the eroding effects of inflation. As with general revenues, current dollars were deflated into constant dollars by means of the Purchasing Power of the Consumer Dollar Index (1950 = 100). General expenditures (constant dollars) went from $60.70 billion in 1950 to $104.23 billion in 1960 -- 1.7 fold increase. They rose to $170.51 billion in 1970 and thence to $193.35 billion in 1975. The real growth from 1950-1975 was 4.7 percent. See Table 3.3. Per capita general expenditures in constant dollars increased from $400 in 1950 to $580 in 1960. See Table 3.4. One decade later per capita general expenditures increased to $832 in 1970 and to $905 in 1975. The real growth rate from 1950-75 was 3.3 percent but because of the large rate of increase in inflation the real growth rate over the past five years (1950-75) was only 1.7 percent. Figure 3.1 graphically depicts total general revenue in current and constant dollars. The effect of inflation over the past quarter century is clearly visible.

TABLE 3.2

PER CAPITA TOTAL GENERAL EXPENDITURES (CONSTANT DOLLARS, 1950 = 100) AND ITS VARIOUS COMPONENTS, UNITED STATES, ALL GOVERNMENTS, 1950 - 1975

YEAR	TOTAL GENERAL EXPENDITURES	NATIONAL DEFENSE	EDUCATION	HIGHWAYS	PUBLIC WELFARE	NATURAL RESOURCES	INTEREST ON GENERAL DEBT	OTHER
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1950	400.16	121.00	63.59	25.52	19.53	32.99	32.05	105.48
1951								
1952	581.66	307.02	61.15	30.03	18.03	20.72	30.67	114.04
1953	631.32	335.81	63.40	31.66	18.52	30.18	34.32	117.43
1954	618.05	303.37	68.94	34.39	19.10	39.27	33.96	119.02
1955	591.90	263.02	76.90	39.44	19.42	38.34	34.39	120.39
1956	610.57	259.32	84.63	42.04	19.03	39.62	37.63	128.30
1957	644.25	278.79	88.61	46.55	20.74	36.02	38.75	134.79
1958	667.58	274.76	97.13	50.20	22.30	35.53	42.46	145.20
1959	703.72	281.49	102.64	55.10	23.75	45.12	39.42	156.20
1960	714.47	271.80	107.80	53.14	24.78	39.37	51.84	165.74
1961	760.20	279.74	115.88	54.60	26.10	53.29	50.85	179.74
1962	802.69	296.90	122.77	56.54	27.69	56.33	49.36	193.10
1963	826.90	298.87	129.75	59.97	29.35	50.41	52.18	206.37
1964	867.88	299.55	142.87	61.80	30.72	52.47	55.64	224.83
1965	895.76	287.95	152.79	63.71	33.12	56.70	58.97	242.52
1966	967.06	310.59	177.86	65.83	35.56	52.59	62.68	261.95
1967	1,096.15	377.22	203.24	70.92	48.47	51.27	67.75	277.28
1968	1,182.56	419.66	218.22	73.32	56.26	46.03	74.41	294.66
1969	1,267.44	418.46	249.48	77.94	72.94	49.64	84.15	314.83
1970	1,342.34	411.23	272.21	81.73	85.49	55.97	89.86	345.85
1971	1,454.19	390.76	309.30	88.84	98.74	66.35	104.74	395.46
1972	1,553.09	391.28	332.53	92.17	112.80	69.71	110.16	444.44
1973	1,655.89	394.48	355.92	89.75	128.16	79.41	119.37	488.80
1974	1,779.90	410.76	385.32	95.27	146.43	74.35	142.11	525.66
1975	2,026.48	448.62	445.12	107.00	184.59	75.82	154.61	610.72

Note: See end of chapter for data sources.

TABLE 3.3

TOTAL GENERAL EXPENDITURES, (CONSTANT DOLLARS, 1950 = 100) AND ITS VARIOUS COMPONENTS
UNITED STATES, ALL GOVERNMENTS
(In Millions)

YEAR	TOTAL GENERAL EXPENDITURES	NATIONAL DEFENSE	EDUCATION	HIGHWAYS	PUBLIC WELFARE	NATURAL RESOURCES	INTEREST ON GENERAL DEBT	OTHER GENERAL EXPENDITURES
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1950	60,701.0	18,353.0	9,647.0	3,872.0	2,964.0	5,005.0	4,862.0	15,996.0
1951								
1952	82,709.6	43,657.4	8,695.8	4,270.9	2,564.0	2,946.3	4,361.5	16,213.8
1953	90,559.0	48,171.1	9,095.2	4,542.6	2,657.4	4,329.6	4,923.8	16,839.2
1954	89,826.7	44,092.2	10,020.4	4,999.5	2,777.2	5,707.4	4,935.9	17,294.1
1955	87,947.4	39,081.3	11,426.3	5,861.5	2,885.8	5,697.9	5,109.9	17,884.7
1956	90,510.2	38,441.8	12,545.8	6,233.0	2,821.0	5,874.2	5,579.1	19,015.3
1957	93,849.1	40,612.5	12,908.8	6,781.0	3,021.6	5,247.1	5,645.6	19,632.5
1958	96,274.0	39,624.8	14,007.6	7,240.1	3,216.5	5,125.1	6,123.5	20,936.4
1959	102,479.0	40,992.6	14,948.2	8,024.0	3,459.2	6,572.0	5,741.2	22,742.0
1960	104,423.2	39,724.7	15,756.0	7,766.8	3,623.1	5,754.6	7,577.6	24,220.3
1961	111,885.4	41,172.8	17,056.1	8,036.0	3,842.3	7,843.8	7,484.4	26,450.0
1962	118,581.4	43,861.7	18,137.1	8,353.9	4,091.9	8,322.1	7,292.5	28,522.2
1963	122,617.6	44,319.4	19,241.3	8,893.6	4,352.9	7,475.6	7,739.0	30,595.8
1964	129,880.8	44,828.9	21,381.4	9,249.5	4,598.2	7,852.8	8,327.5	33,642.4
1965	132,293.1	42,527.2	22,565.1	9,409.2	4,892.0	8,374.4	8,709.7	35,815.5
1966	140,349.8	45,076.5	25,814.2	9,555.2	5,161.1	7,633.0	9,098.0	38,011.8
1967	156,159.4	53,739.4	28,954.1	10,103.8	6,906.2	7,304.4	9,652.3	39,499.2
1968	163,552.8	58,040.8	30,180.9	10,140.6	7,781.5	6,366.4	10,292.1	40,750.5
1969	167,886.1	55,429.4	33,047.3	10,324.1	9,662.9	6,575.1	11,146.8	41,700.0
1970	170,510.5	52,236.9	34,578.0	10,382.5	10,860.5	7,110.8	11,414.8	43,927.0
1971	178,851.0	48,060.5	38,040.9	10,927.2	12,144.9	8,161.6	12,882.7	48,633.2
1972	186,829.6	47,070.1	40,002.6	11,088.0	13,569.4	8,386.0	13,292.4	53,421.1
1973	188,841.5	44,988.2	40,590.4	10,236.2	14,616.1	9,056.8	13,613.4	55,740.4
1974	184,062.4	42,478.0	39,846.7	9,852.2	15,143.1	7,689.4	14,696.7	54,356.4
1975	193,351.2	42,804.7	42,469.9	10,209.5	17,612.7	7,234.2	14,751.9	58,268.2

Note: See end of chapter for data source.

TABLE 3.4

PER CAPITA TOTAL GENERAL EXPENDITURES (CONSTANT DOLLARS, 1950 = 100) AND ITS VARIOUS COMPONENTS, UNITED STATES, 1950 - 1975

YEAR	TOTAL GENERAL EXPENDITURES	NATIONAL DEFENSE	EDUCATION	HIGHWAYS	PUBLIC WELFARE	NATURAL RESOURCES	INTEREST ON GENERAL DEBT	OTHER
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1950	400.16	121.00	63.59	25.52	19.53	32.99	32.05	105.48
1951								
1952	526.99	278.16	55.40	27.21	16.33	18.77	27.78	103.34
1953	567.55	301.90	57.00	28.46	16.65	27.13	30.85	105.56
1954	553.16	271.52	61.70	30.78	17.10	35.14	30.39	106.53
1955	532.12	236.46	69.13	35.46	17.46	34.47	30.91	109.84
1956	540.97	229.76	74.98	37.25	16.86	35.10	33.34	113.68
1957	550.83	238.37	75.76	39.80	17.73	30.79	33.13	115.25
1958	555.43	228.60	80.81	41.7[illegible]	18.55	29.56	35.32	120.82
1959	580.57	232.23	84.68	45.45	19.59	37.23	32.52	128.87
1960	580.15	220.70	87.53	43.15	20.12	31.97	42.09	134.59
1961	611.20	224.91	93.17	43.89	20.98	42.84	40.88	144.53
1962	637.93	235.96	97.57	44.94	22.01	44.77	39.23	153.45
1963	649.94	234.91	101.99	47.14	23.07	39.62	41.02	162.19
1964	678.68	234.25	111.72	48.33	24.02	41.03	43.51	175.82
1965	682.57	219.42	116.42	48.54	25.24	43.20	44.93	184.82
1966	716.59	230.15	131.80	48.78	26.35	38.97	46.45	194.09
1967	789.22	271.59	146.33	51.06	34.90	36.91	48.78	199.65
1968	818.33	290.40	151.00	50.73	38.93	31.85	51.49	203.93
1969	831.44	274.51	163.66	51.12	47.85	32.56	55.20	206.54
1970	832.25	254.96	168.77	50.67	53.00	34.70	55.71	214.44
1971	863.79	232.11	183.72	52.77	58.65	39.41	62.21	234.92
1972	894.58	225.38	191.54	53.09	64.97	40.15	63.64	255.81
1973	897.42	213.81	192.91	48.64	69.46	43.04	64.69	264.87
1974	868.59	200.45	188.03	46.49	71.46	36.28	69.35	256.53
1975	905.83	200.53	198.96	47.83	82.51	33.89	69.11	273.00

Note: See end of chapter for data source.

PROJECTED GENERAL EXPENDITURES - UNITED STATES

This section deals with the projection of general expenditures for all governments in the United States by selected categories over the 1976 to 1990 period. As with general revenues, general expenditures were projected utilizing several different statistical procedures, namely straight line regression, polynomial regression, natural logarithm regression, multiple order regression, and Fourier Analysis regression. The object was to secure those regression equations having the highest forecasting efficiency coefficient. See Table 3.5.

Total general expenditures for the United States as a whole was projected from the measure itself and then disaggregated to produce values for its selected components. As a statistical check for reasonableness, general expenditures were also projected from its selected components and then aggregated to obtain total general expenditures. These procedures produced projected general expenditures base line data which were modified in light of a number of underlying assumptions concerning general revenue.

Projected Expenditures for National Defense - United States

Expenditures for national defense[1] reflected outlays made only by the United States Federal Government. This category is identical with the national defense budget function

TABLE 3.5

COEFFICIENTS OF FORECASTING EFFICIENCY FOR VARIOUS UNITED STATES EXPENDITURE MEASURES

REVENUE MEASURE (1)	REGRESSION EQUATION COEFFICIENTS					
	STRAIGHT LINE		POLYNOMIAL		NATURAL LOGARITHM	
	Constant (2)	Current (3)	Constant (4)	Current (5)	Constant (6)	Current (7)
I. Total General Expenditures Predicted From Itself	.828	.678	.817	.929*	.829*	.852
A. National Defense	.162*	.619	.101	.687*	.152	.515
B. Education	.783	.645	.862	.937*	.878*	.900
C. Highways	.686*	.895*	.665	.852	.613	.845
D. Public Welfare	.558	.617	.894*	.923*	.711	.719
E. Natural Resources	.363*	.664	.345	.665*	.340	.654
F. General Debt	.768	.609	.890*	.905*	.856	.839
G. Other	.805	.638	.874	.916*	.886*	.893

*The asterisk indicates the projective formula actually used to predict each expenditure component.

and includes the military activities of the Department of Defense, military assistance, atomic energy defense activities, and defense related activities of civilian agencies. In projecting national defense expenditures several assumptions were made: (1) There would be no major wars or crises; (2) military and civilian pay was based on provisions of the Federal Pay Comparability Act of 1970 designed to maintain comparability with private wages and salaries; (3) pay increases for individuals in this category would average slightly above five percent; (4) and inflation would rise at a level slightly below five percent.

In 1950, national defense expenditures totalled $18.36 billion. The Korean War resulted in expenditures increasing rather rapidly to $53.58 billion in 1953, trending downward to $48.92 billion in 1960. Over the next decade expenditures trended upward to $84.25 billion in 1970, reflecting the military outlays for the Vietnam War. During the early seventies expenditures for national defense dropped principally because of termination of the Vietnam War to $80.91 billion and increased from this point to $95.76 billion in 1975. Over the past quarter century expenditures for national defense increased at an average annual rate of 12.34 percent. Over the past five years, expenditures for this purpose increased at a 2.6 percent rate. Figure 3. graphically portrays the current dollar expenditures for national defense. Figure 3. depicts the yearly percentage increases in

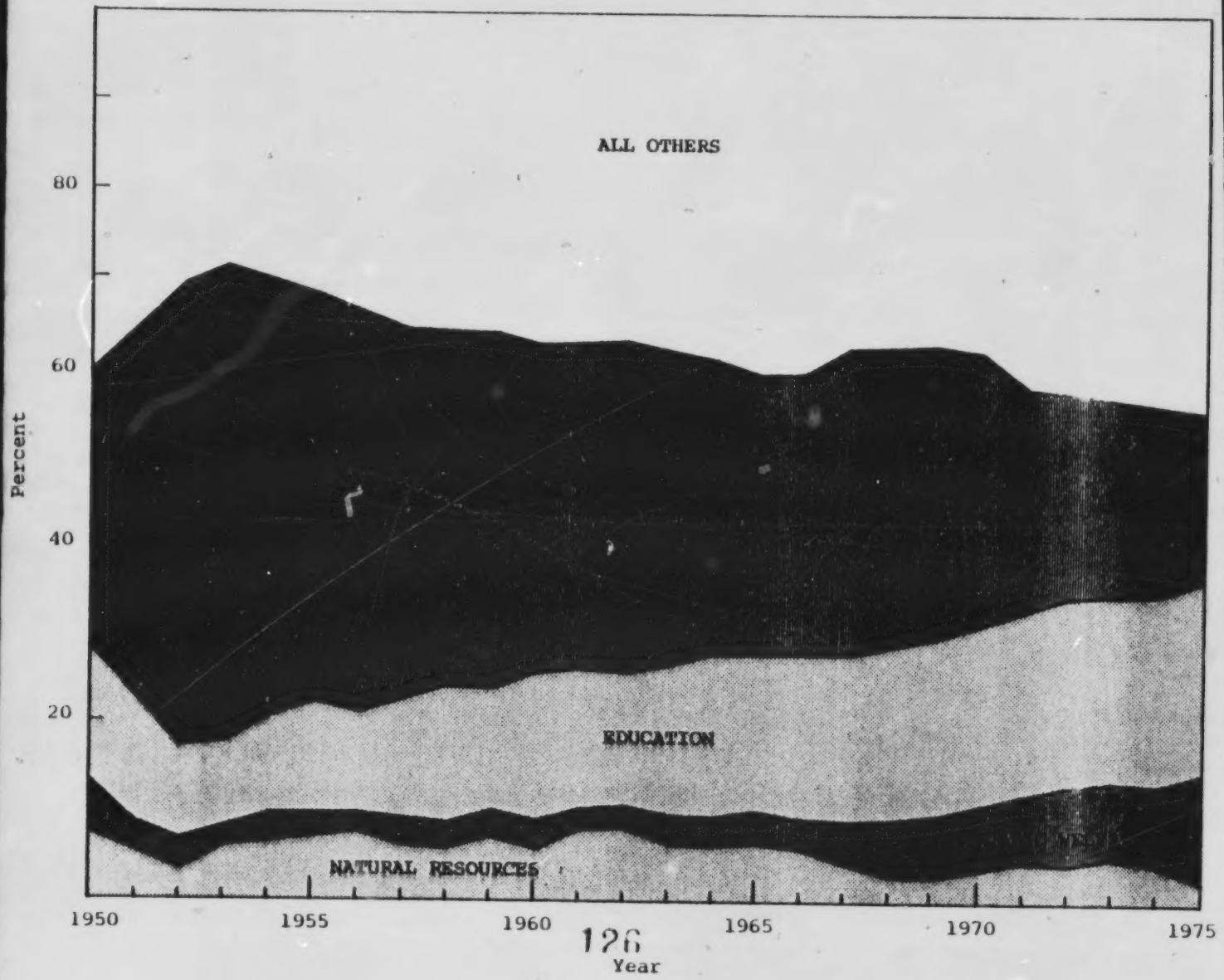

Figure 3.4. Percent that Various Expenditure Components are of Total United States Total General Expenditures, 1950-1975.

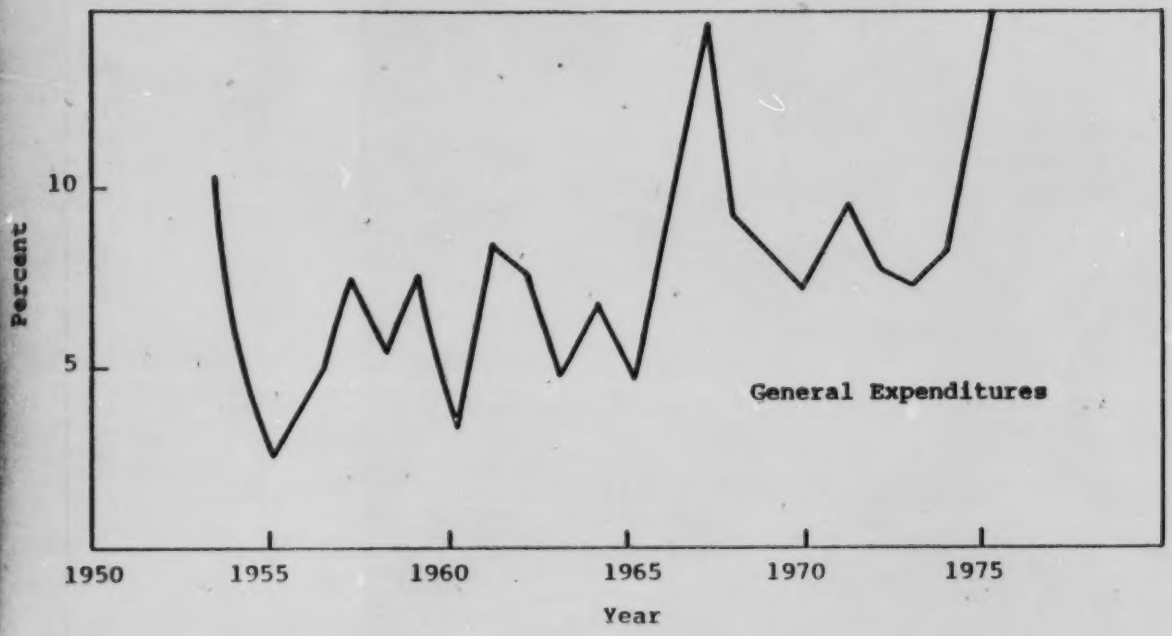

Figure 3.5. Trend Data for United States Total General Expenditures Yearly Growth Rates in Current Dollars.

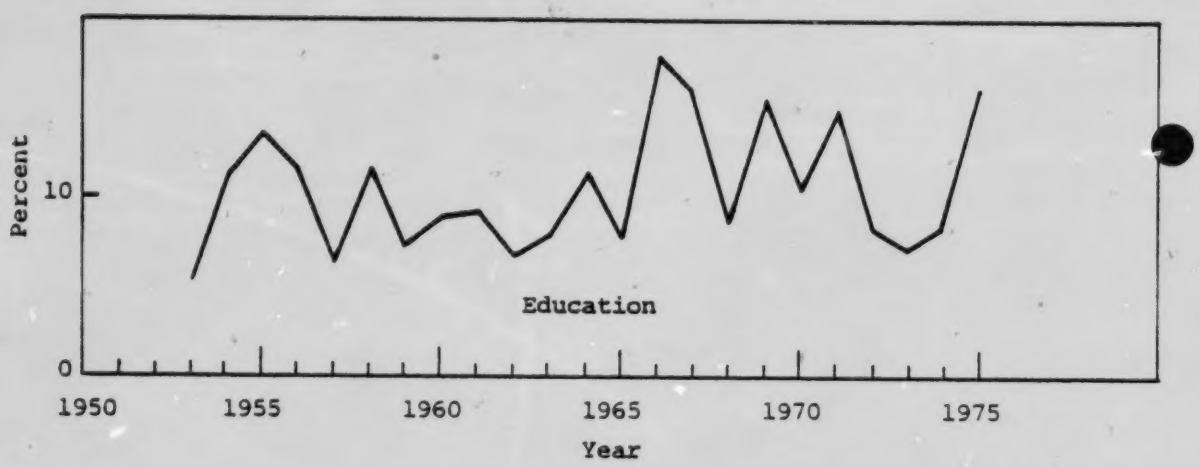

Figure 3.6. Trend Data for United States Education Expenditures Yearly Growth Rates in Current Dollars.

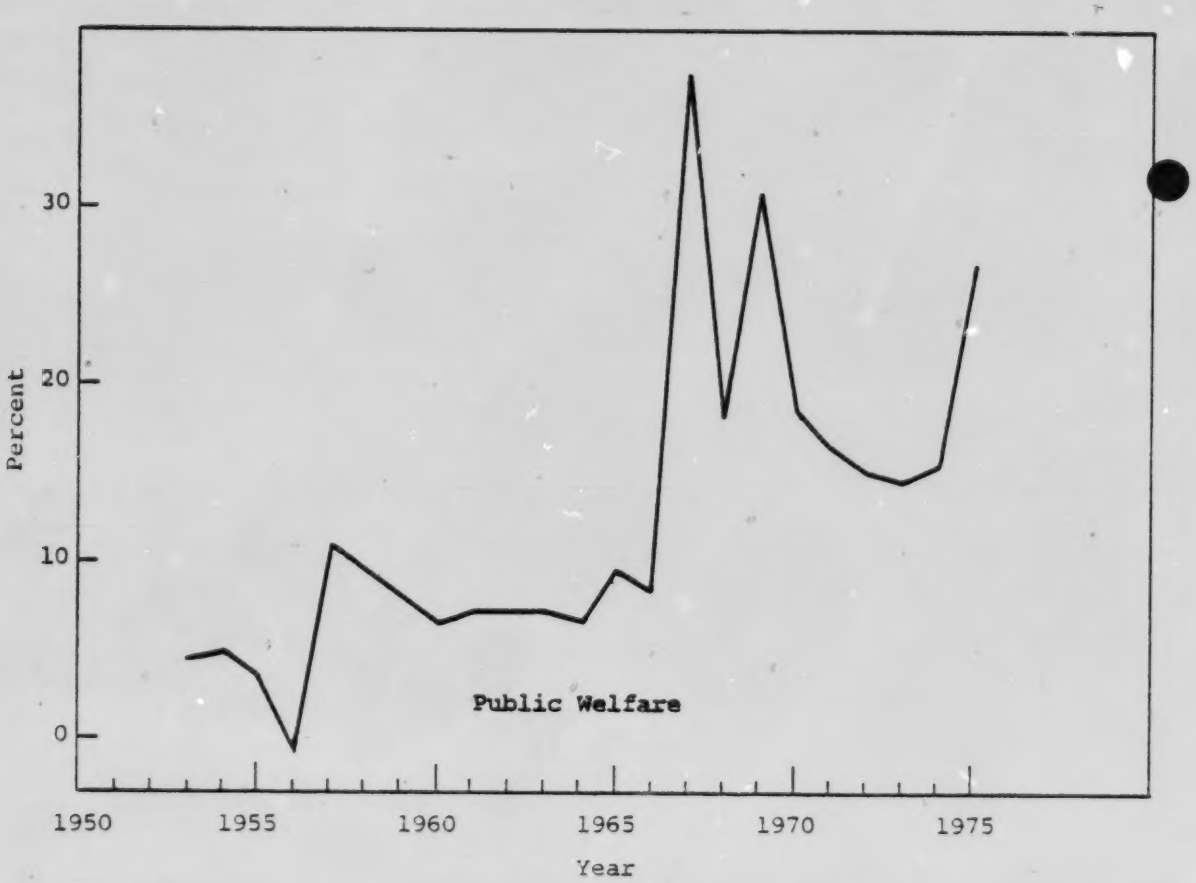

Figure 3.7. Trend Data for United States Public Welfare Expenditures Yearly Growth Rates in Current Dollars.

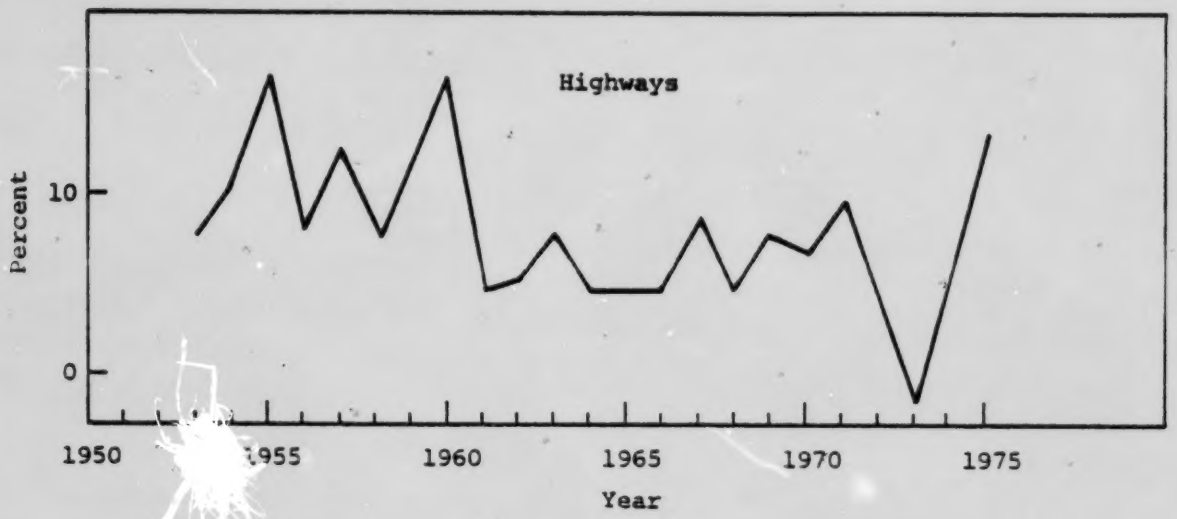

Figure 3.8. Trend data for United States Highways Expenditures Yearly Growth Rates in Current Dollars.

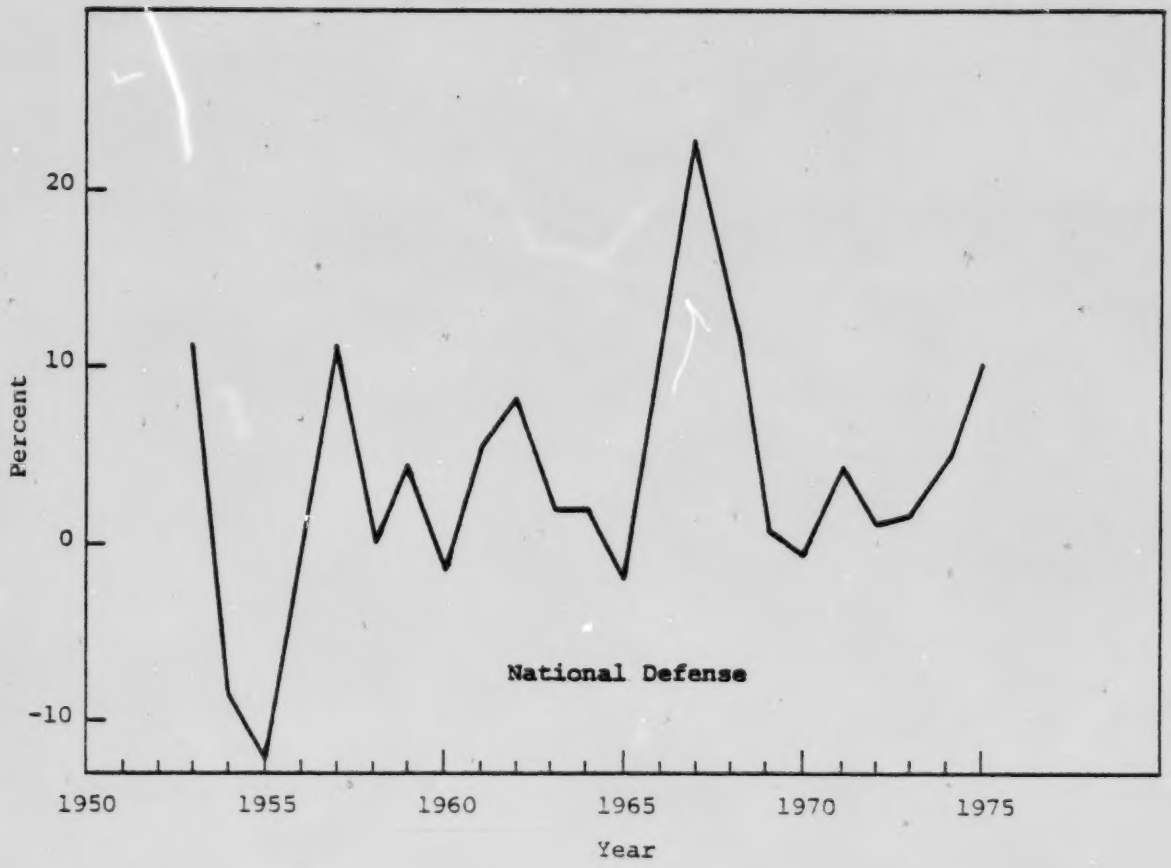

Figure 3.9. Trend Data for United States National Defense Expenditures Yearly Growth Rates in Current Dollars.

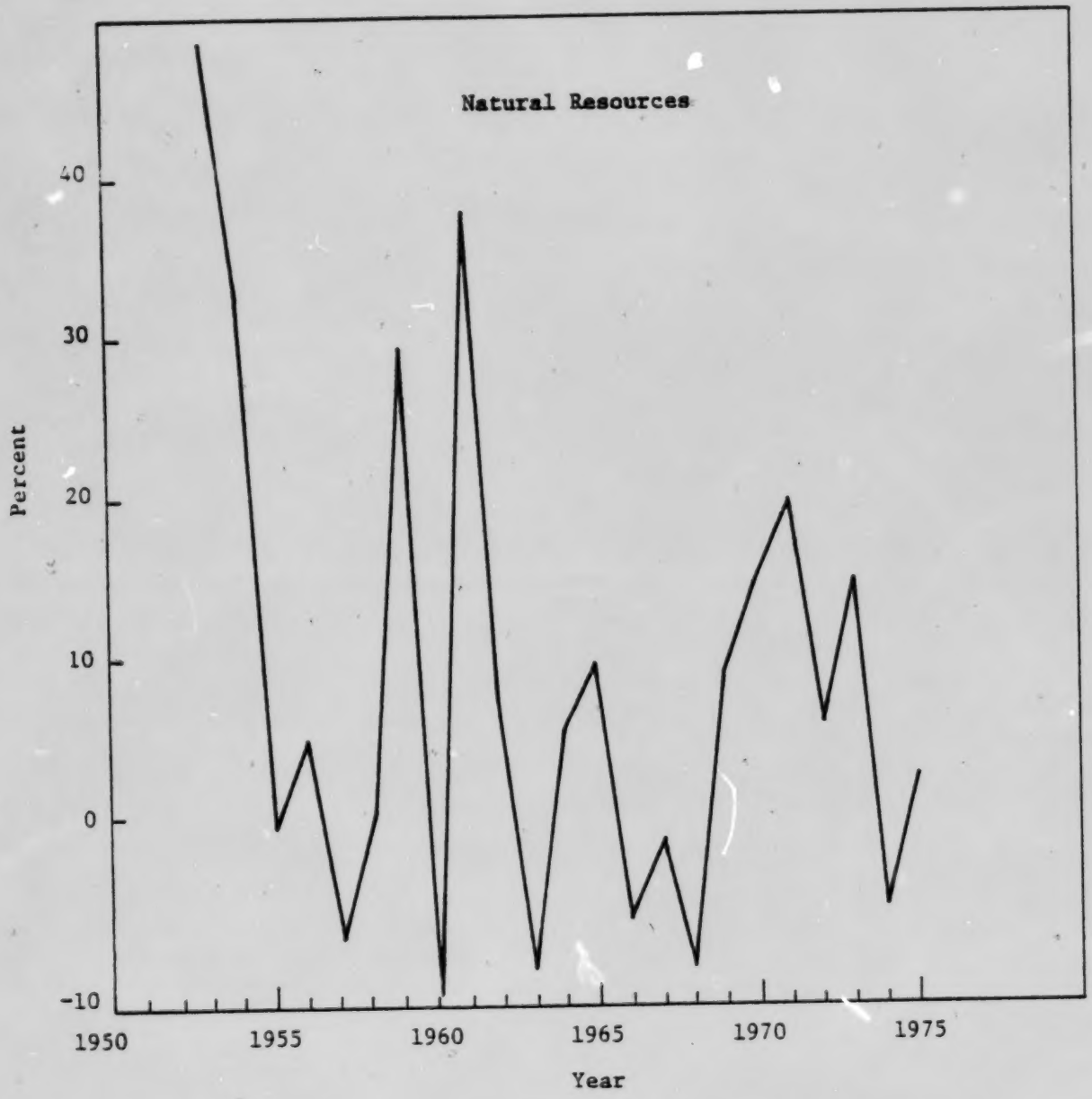

Figure 3.10. Trend Data for United States Natural Resources Expenditures Yearly Growth Rates in Current Dollars.

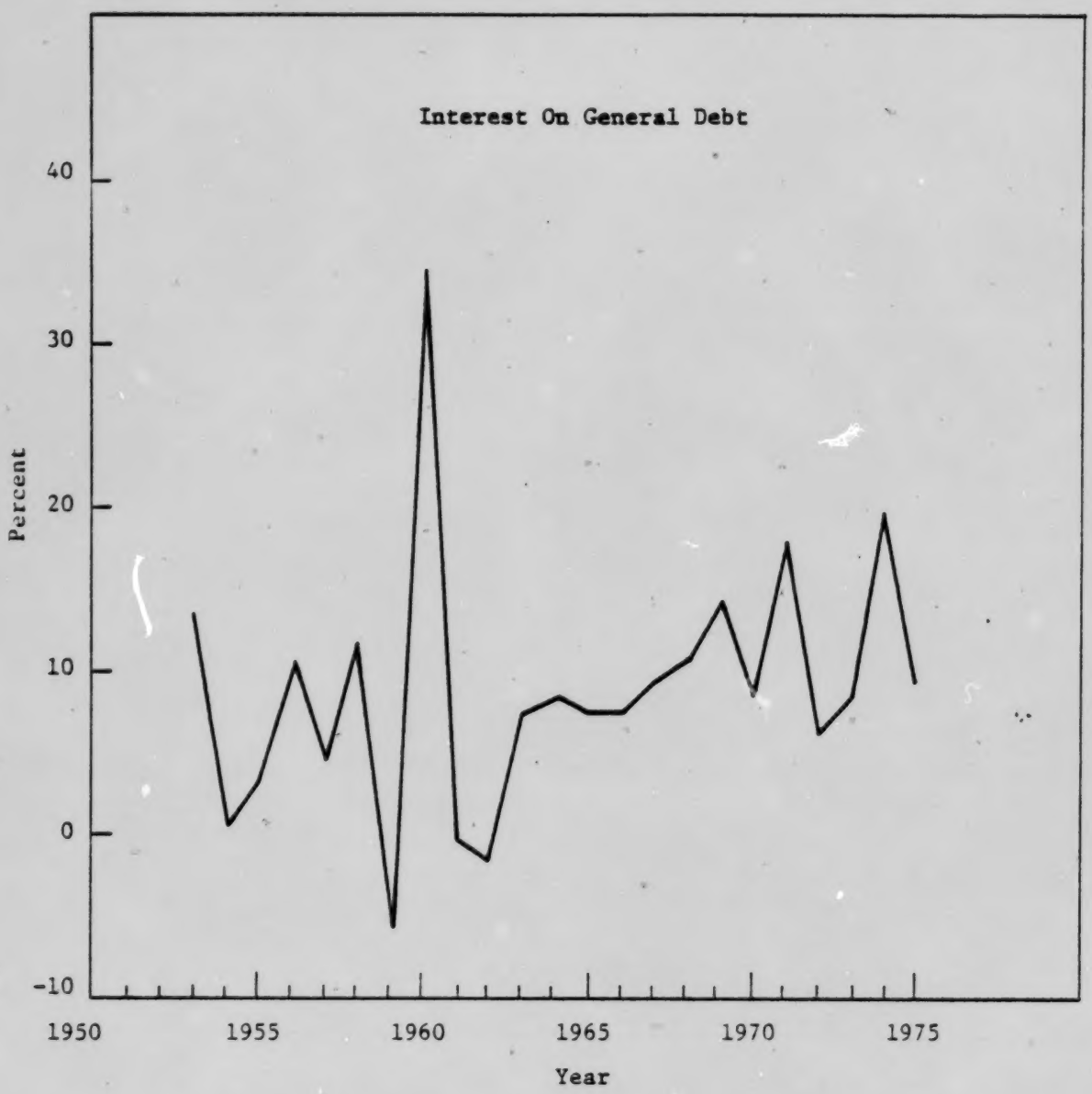

Figure 3.11. Trend Data for United States Interest on General Debt Expenditures Yearly Growth Rates in Current Dollars.

national defense outlays and Table 3. contains the numerical data.

The burden of national defense can be measured in terms of per capita expenditures (See Table 3.2) and as a percent of total general expenditures (See Table 3.6). Per capita expenditures for national defense was $121 in 1950 rising to $271 in 1960 -- more than doubling. By 1970, per capita expenditures for this function increased 1.5 times the $411, rising to $448 in 1975. Per capita expenditures for defense increased over the 1950-1975 period at a 5.4 percent rate.

The burden of national defense analyzed in terms of its percent of total general expenditures reflects a second method to assess the impact of national defense upon the nation's economy. In 1950, national defense accounted for 30.2 percent of total general expenditures. Because of the Korean War the figure rose rapidly to 53.2 percent in 1953. From this high point national defense has continually reflected a decreasing share of total general expenditures, declining to 38.0 percent in 1960, to 30.6 percent in 1970, and to 22.2 percent in 1975. The rate of decline from 1953 to 1975 was at a 3.9 percent average annual decrease.

When national defense expenditures are expressed in constant dollars (1950 = 100), they increased from $18.36 billion in 1950 to $42.80 billion in 1975, a 3.4 percent average annual real growth. (See Table 3.3). On a per capita constant dollar basis, national defense expenditures

TABLE 3.6

PERCENT SELECTED EXPENDITURE MEASURES ARE OF TOTAL GENERAL EXPENDITURES, UNITED STATES, ALL GOVERNMENTS

YEAR (1)	NATIONAL DEFENSE (2)	EDUCATION (3)	HIGHWAYS (4)	PUBLIC WELFARE (5)	NATURAL RESOURCES (6)	INTEREST ON GENERAL DEBT (7)	OTHER (8)
1950	30.2	15.9	6.3	4.9	8.3	8.0	26.4
1951							
1952	52.8	10.5	5.2	3.1	3.5	5.3	19.6
1953	53.2	10.1	5.0	2.9	4.8	5.4	18.6
1954	49.1	11.2	5.6	3.1	6.3	5.5	19.2
1955	44.4	13.0	6.6	3.2	6.4	5.8	20.6
1956	42.5	13.8	6.9	3.1	6.5	6.2	21.0
1957	42.3	13.8	7.2	3.2	5.6	6.0	20.9
1958	41.2	14.6	7.5	3.3	5.3	6.4	21.7
1959	40.0	14.6	7.8	3.4	6.4	5.6	22.2
1960	38.0	15.1	7.4	3.5	5.5	7.3	23.2
1961	36.8	15.2	7.2	3.4	7.0	6.7	23.6
1962	37.0	15.3	7.0	3.5	7.0	6.2	24.0
1963	36.2	15.7	7.3	3.6	6.1	6.3	25.8
1964	34.5	16.5	7.1	3.5	6.1	6.4	25.9
1965	32.2	17.1	7.1	3.7	6.3	6.6	27.0
1966	32.1	18.4	6.8	3.7	5.4	6.5	27.1
1967	34.4	18.5	6.5	4.4	4.7	6.2	25.3
1968	35.5	18.5	6.2	4.7	3.9	6.3	24.9
1969	33.0	19.7	6.2	5.8	3.9	6.6	24.8
1970	30.6	20.3	6.1	6.4	4.2	6.7	25.7
1971	26.9	21.3	6.1	6.8	4.6	7.2	27.1
1972	25.2	21.4	5.9	7.3	4.5	7.1	28.6
1973	23.8	21.5	5.4	7.7	4.8	7.2	29.6
1974	23.1	21.6	5.4	8.2	4.2	8.0	29.5
1975	22.2	22.0	5.3	9.1	3.7	7.6	30.1

Note: See end of chapter for data source.

increased from $121 in 1950 to $200 in 1975, reflecting a 2.0 percent real growth increase. (See Table 3.4).

Projected Expenditures for National Defense -- United States. In light of the assumptions previously stated, national defense expenditures are projected to increase from $95.76 billion in 1975 to $118.73 billion in 1980 -- a 4.4 percent average annual increase. In 1985, national defense expenditures are projected to increase to $145.22 billion but at a slower rate -- 4.2 percent -- than the previous half decade. By 1990, the figure is projected to reach $176.44 billion, reflecting a still slower average annual increase of 3.9 percent. See Table 3.7. National defense will account for decreasing shares[1] of total general expenditures declining from 22 percent in 1975 to 18 percent in 1985, and to 13 percent in 1990. On a per capita basis, national defense expenditures are projected to increase to $532 in 1980 and to $719 in 1990. Over the next decade and a half this reflects a per capita average annual increase of 4.2 percent which is less than its long term historic rate of 5.4 percent. See Table 3.8.

When national defense expenditures are projected on a constant dollar basis, expenditures are projected to rise to $42.15 billion in 1980 and to $44.64 billion in 1990. See Table 3.9. Because of inflation the real growth rate in national

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[1] This represents lower percentages for national defense than those projected in Five Year Budget Projections: Fiscal Years 1978-1982, Congress of the United States, Congressional Budget Office, December, 1976.

TABLE 3.7

UNITED STATES, ALL GOVERNMENTS, PROJECTED EXPENDITURES IN CURRENT DOLLARS
(In Millions)

YEAR	TOTAL GENERAL EXPENDITURES	NATIONAL DEFENSE	EDUCATION	HIGHWAYS	PUBLIC WELFARE	NATURAL RESOURCES	GENERAL DEBT	OTHER
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1976	459,929	100,259	104,916	21,185	43,332	15,816	35,298	139,123
1977	500,754	104,628	115,946	21,894	49,917	16,303	38,828	153,238
1978	544,724	109,163	127,825	22,604	57,275	16,789	42,630	168,438
1979	591,976	113,862	140,584	23,313	65,466	17,276	46,712	184,763
1980	642,655	118,726	154,253	24,023	74,550	17,762	51,087	202,254
1981	696,903	123,755	168,865	24,732	84,588	18,249	55,763	220,951
1982	754,868	128,949	184,451	25,442	95,647	18,735	60,750	240,894
1983	816,698	134,308	201,042	26,151	107,792	19,222	66,060	262,123
1984	882,543	139,832	218,669	26,861	121,094	19,709	71,700	284,678
1985	952,555	145,520	237,364	27,570	135,622	20,195	77,683	308,601
1986	1,026,792	151,374	257,159	28,280	151,450	20,582	84,018	333,929
1987	1,105,706	157,392	278,085	28,989	168,653	21,168	90,714	360,705
1988	1,189,162	163,576	300,173	29,698	187,310	21,655	97,782	388,968
1989	1,277,416	169,924	323,454	30,408	207,499	22,141	105,232	418,758
1990	1,370,636	176,437	347,961	31,117	229,302	22,628	113,075	450,116

Note: See end of chapter for data source.

TABLE 3.8

UNITED STATES, ALL GOVERNMENTS, PROJECTED PER CAPITA EXPENDITURES IN CURRENT DOLLARS

YEAR (1)	TOTAL GENERAL EXPENDITURES (2)	NATIONAL DEFENSE (3)	EDUCATION (4)	HIGHWAYS (5)	PUBLIC WELFARE (6)	NATURAL RESOURCES (7)	INTEREST ON GENERAL DEBT (8)	OTHER (9)
1976	2,138.46	466.16	487.81	98.50	201.47	73.53	164.12	646.86
1977	2,309.60	482.57	534.77	100.98	230.22	75.19	179.08	706.77
1978	2,490.98	499.19	584.53	103.36	261.91	76.77	194.94	770.25
1979	2,682.71	515.99	637.09	105.64	296.67	78.29	211.68	837.30
1980	2,884.84	532.95	692.43	107.83	334.65	79.73	229.32	907.90
1981	3,097.85	550.11	750.63	109.93	376.00	81.12	247.87	982.16
1982	3,322.38	567.53	811.81	111.97	420.96	82.45	267.37	1,060.24
1983	3,558.84	585.26	876.06	113.95	469.71	83.76	287.86	1,142.22
1984	3,807.74	603.30	943.44	115.89	522.46	85.03	309.35	1,228.24
1985	4,069.56	621.69	1,014.08	117.78	579.41	86.27	331.88	1,318.42
1986	4,344.46	640.47	1,088.06	119.65	640.80	87.08	355.48	1,412.88
1987	4,634.21	659.65	1,165.50	121.49	706.85	88.71	380.19	1,511.78
1988	4,938.19	679.27	1,246.51	123.32	777.83	89.92	406.05	1,615.25
1989	5,263.93	700.21	1,332.88	125.30	855.05	91.23	433.63	1,725.60
1990	5,592.72	719.93	1,419.81	126.96	935.64	92.33	461.38	1,836.64

Note: See end of chapter for data source.

TABLE 3.9

UNITED STATES, ALL GOVERNMENTS, PROJECTED EXPENDITURES IN CONSTANT DOLLARS (1950 = 100)
(In Millions)

YEAR	TOTAL GENERAL EXPENDITURES	NATIONAL DEFENSE	EDUCATION	HIGHWAYS	PUBLIC WELFARE	NATURAL RESOURCES	GENERAL DEBT	OTHER
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1975 (ACTUAL)	193,351.19	42,804.72	42,469.92	10,209.48	17,612.69	7,234.25	14,751.89	58,268.24
				PROJECTED				
1976	191,330.46	41,707.74	43,645.06	8,812.96	18,026.11	6,579.46	14,683.97	57,875.16
1977	200,301.60	41,851.20	46,378.40	8,757.60	19,966.80	6,521.20	15,531.20	61,295.20
1978	209,718.74	42,027.76	49,212.62	8,702.54	22,050.87	6,463.77	16,412.55	64,848.63
1979	219,031.12	42,128.94	52,016.08	8,625.81	24,222.42	6,392.12	17,283.44	68,362.31
1980	228,142.53	42,147.73	54,759.82	8,528.16	26,465.25	6,305.51	18,135.89	71,800.17
1981	238,340.83	42,324.21	57,751.83	8,458.34	28,929.10	6,241.16	19,070.94	75,565.24
1982	249,106.44	42,553.17	60,868.83	8,395.86	31,563.51	6,182.55	20,047.50	79,495.02
1983	260,526.66	42,844.23	64,132.40	8,342.17	34,385.64	6,131.82	21,073.14	83,617.24
1984	272,705.79	43,208.09	67,568.72	8,300.05	37,418.05	6,090.08	22,155.30	87,965.50
1985	283,861.39	43,364.96	70,734.77	8,215.86	40,415.36	6,018.11	23,149.53	91,963.10
1986	295,716.10	43,595.71	74,061.79	8,144.64	43,617.60	5,927.62	24,197.19	96,171.55
1987	306,259.97	43,912.37	77,585.72	8,087.93	47,054.19	5,905.87	25,309.21	98,404.70
1988	321,073.74	44,165.52	81,046.71	8,018.46	50,573.70	5,846.85	26,401.14	105,021.36
1989	329,442.99	44,520.09	84,744.95	7,966.90	54,364.74	5,800.94	27,570.78	104,474.60
1990	346,770.91	44,638.56	88,034.13	7,872.60	58,013.41	5,724.88	28,607.98	113,879.35

Note: See end of chapter for data source.

defense expenditures is projected to be only 0.3 percent. Per capita national defense expenditures in constant dollars are projected to decrease over the next decade and a half from $200 in 1975, to $189 in 1980 and to $182 in 1990. See Table 3.10.

Projected Expenditures for Education -- United States

Expenditures for education[1] include outlays for public elementary and secondary education, municipal colleges, community colleges, the school lunch and milk program, aid to libraries, physically handicapped students, support of some functions of nonpublic schools such as transportation and textbooks, and some adult recreation programs.

In 1950, expenditures for education amounted to $9.65 billion, increasing to $19.40 billion in 1960 -- a two-fold increase. In 1970, expenditures increased to $55.77 billion, reflecting almost a three-fold increase over the 1960 decade. By 1975, expenditures for education had risen to $95.01 billion. See Table 3.1. Historically the average annual increase was 9.6 percent but the rate increased to 11.2 percent over the past five years. Yearly percentage increases are shown in Figure 3.11 .

Education has accounted for an increasing share of total general expenditures. In 1950, expenditures for education

TABLE 3.10

UNITED STATES, ALL GOVERNMENTS, PROJECTED PER CAPITA EXPENDITURES IN CONSTANT DOLLARS (1950 = 100)

YEAR (1)	TOTAL GENERAL EXPENDITURES (2)	NATIONAL DEFENSE (3)	EDUCATION (4)	HIGHWAYS (5)	PUBLIC WELFARE (6)	NATURAL RESOURCES (7)	INTEREST ON GENERAL DEBT (8)	OTHER (9)
1975	905.84	200.54	198.97	47.83	82.52	33.89	69.11	272.98
1976	889.60	193.92	202.93	40.98	83.81	30.59	68.27	269.10
1977	923.84	193.03	213.91	40.39	92.09	30.08	71.63	282.71
1978	959.03	192.19	225.05	39.79	100.84	29.56	75.05	296.55
1979	992.60	190.92	235.73	39.09	109.77	28.97	78.32	309.80
1980	1,024.12	189.20	245.81	38.28	118.80	28.31	81.41	322.31
1981	1,069.90	189.99	259.25	37.97	129.86	28.01	85.61	339.21
1982	1,096.39	187.29	266.44	36.95	138.92	27.21	88.24	351.34
1983	1,135.27	186.70	279.46	36.35	149.84	26.72	91.83	364.37
1984	1,176.59	186.42	291.53	35.91	161.44	26.27	95.59	379.53
1985	1,212.73	185.27	302.20	35.10	172.66	25.71	98.90	392.89
1986	1,251.20	184.46	313.36	34.46	184.55	25.08	102.38	406.91
1987	1,253.59	184.04	325.18	33.90	197.21	24.75	106.08	412.43
1988	1,333.31	183.40	336.56	33.30	210.02	24.28	109.63	436.12
1989	1,357.56	183.46	349.21	32.83	224.02	23.90	113.61	430.52
1990	1,414.96	182.14	359.22	32.12	236.72	23.36	116.73	464.67

Note: See end of chapter for data source.

accounted for 15.9 percent of total general expenditures for all governments. Because of the outlays for national defense in the earlier fifties, education's share of total general expenditures decreased. Since its low of 10.1 percent in 1953, the trend, however, has been that educational expenditures have accounted for increasing shares of total general expenditures, from 15.1 percent in 1960, to 20.3 percent in 1970, and to 22.0 percent in 1975. See Table 3.6. Expenditures for education as a percent of Gross National Product has slowing increased over the past decades. From 3.3 percent in 1950, this ratio increased to 3.8 percent in 1960. In 1970, this ratio was 5.7 percent, increasing to 5.8 percent in 1975.

To measure the real growth in educational expenditures, current dollars were deflated to 1950 constant dollars by means of the Purchasing Power of the Consumer Dollar Index. Expenditures for education in constant dollars increased from $9.65 billion in 1950 to $15.76 billion in 1960. During the decade of the sixties, inflation increased at a relatively low rate. Thus, constant dollar expenditures for education increased more than two-fold to $34.58 billion in 1970. Over the past five years, the constant dollar increase was considerably less than the increase in 1960 decade, reaching $42.47 billion in 1975. See Table 3.3. The real growth rate over the past twenty-five years was 6.1 percent compared to only 4.2 percent over the past five years. When real growth for educational expenditures is expressed in per capita increases, over the 1950-1975 period, the average annual increase was 4.6

percent. Per capita expenditures for education in constant dollars increased from $64 in 1950 to $188 in 1975. See Table 3.4. The real growth rate over the past five years (1970-75) was only 2.1 percent -- a consequence of the severe rise in inflation.

Projected Expenditures for Education -- United States. In light of the assumptions regarding expenditures previously stated, and specifically allowing for decreasing student enrollments at the elementary and secondary levels, expenditures for education are projected to increase from $95.01 billion in 1975 and to $154.25 billion in 1980 -- a 10.2 percent average annual rate, slightly lower than the 11.2 percent rate for the past five years (1970-75). See Table 3.7. Over the subsequent five years (1980-1985), expenditures are projected to increase at a lower rate, 9.0 percent, than in the previous half decade, attaining a level of $237.36 billion. The next half decade (1985-90), educational expenditures are projected to increase at a still lower rate 18.0 percent, than the previous half decade, increasing to $347.96 billion in 1990. Barring wars and profound international crises, expenditures for education are projected to account for larger shares of total general expenditures than national defense. We project the ratio for education to rise to 24 percent in 1980, 25 percent in 1985, and 26 percent in 1990.

An analysis of projections for educational expenditures on a per capita basis, reveals that the figure will increase from $385 in 1975 and to $692 in 1980. The increase

is projected to continue, reaching $1,014 in 1985 and $1,420 in 1990. Table 3.8 contains the numberical data on per capita expenditures for education. Per capita expenditures for education are projected to increase at an 8.0 percent rate from 1975-1990 which is in accordance with its long term historical rate increase.

When expenditures for education are projected in terms of real growth (constant dollars), they are projected to increase from $42.47 billion in 1975 and to $54.76 billion in 1980. See Table 3.9. Despite inflation, the real growth in educational expenditures is projected to increase to $70.73 billion in 1985 and to $88.03 billion in 1990. Over the 1975-90 projection period, the real growth in educational expenditures is projected to increase at a 4.9 percent average annual rate. Another way of expressing real growth is on a per capita basis in constant dollars. Table 3.10 contains the numerical data. Per capita expenditures for education in constant dollars are projected to increase from $188 in 1975 and to $246 in 1980. By 1985, the per capita expenditures in constant dollars is projected to rise to $302 and to $359 in 1990. The rate of average annual increase in per capita expenditures for education (1950 constant dollars) is 4.4 percent.

Projected Expenditures for Highways -- United States

In 1950, expenditures (current dollars) for highways, roads, and other routes of travel totalled $3.87 billion.[1] Expenditures for these purposes increased at a compound annual growth rate of 7.4 percent over the next quarter century so that by 1975, $22.84 billion was expended for highway construction and related services. See Table 3.1. These increases in highway expenditures reflected the federal government's multi-billion dollar road building program as well as that of the states and local governments. The need for new roads and improvements was particularly acute because of the migration from cities to suburbs, and the great increase in automobile ownership. Over the past five years, expenditures for highways increased at a slower rate. Figure 3.8 graphically depicts the yearly percentage increases in highway expenditures. The data are enumerated in Table 3.11 . Highway expenditures as a percent of total general expenditures have remained relatively constant over the past twenty-five years, going from 6.3 percent in 1950 to its high of 7.8 percent in 1959 and to 5.3 percent in 1975.

Table 3.2 indicates the per capita expenditures for highways. From $25.52 in 1950, per capita expenditures for highways increased to $107.00 in 1975, reflecting an average annual growth rate of 5.9 percent.

TABLE 3.11

YEARLY PERCENTAGE GROWTH RATES FOR UNITED STATES EXPENDITURES, ALL GOVERNMENTS, AND COMPONENTS IN CURRENT DOLLARS

YEAR (1)	TOTAL GENERAL EXPENDITURE (2)	NATIONAL DEFENSE (3)	EDUCATION (4)	HIGHWAYS (5)	PUBLIC WELFARE (6)	NATURAL RESOURCES (7)	INTEREST ON GENERAL DEBT (8)	OTHER (9)
1953	9.5	10.3	4.6	6.4	3.6	47.0	12.9	3.9
1954	- .8	- 8.5	10.2	10.1	4.5	31.8	.2	2.7
1955	- 2.1	-11.4	14.0	17.2	3.9	- .2	3.5	5.0
1956	2.9	- 1.6	9.8	6.3	- 2.2	3.1	9.2	4.7
1957	3.7	5.6	2.9	8.8	7.1	-10.7	1.2	3.2
1958	2.6	- 2.4	8.5	6.8	6.5	- 2.3	8.5	6.6
1959	6.4	3.5	6.7	10.8	7.5	28.2	- 6.2	8.6
1960	1.9	- 3.1	5.4	- 3.2	4.7	-12.4	32.0	6.5
1961	7.1	3.6	8.3	3.5	6.1	36.3	- 1.2	9.2
1962	6.0	6.5	6.3	4.0	6.5	6.1	- 2.6	7.8
1963	3.4	1.0	6.1	6.5	6.4	-10.2	6.1	10.7
1964	5.9	1.1	11.1	4.0	5.6	5.0	7.6	6.6
1965	1.9	- 5.1	5.5	1.7	6.4	6.6	4.6	6.5
1966	6.1	6.0	14.4	1.6	5.5	- 8.9	4.5	6.1
1967	11.3	19.2	12.2	5.7	3.8	- 4.3	6.1	3.9
1968	4.7	8.0	4.2	.4	12.7	-12.8	6.6	3.2
1969	2.6	- 4.5	9.5	1.8	24.2	3.3	8.3	2.3
1970	1.6	- 5.8	4.6	.6	12.4	8.1	2.4	5.3
1971	4.9	- 8.0	10.0	5.2	11.8	14.8	12.9	10.7
1972	4.5	- 2.1	5.2	1.5	11.7	2.7	3.2	9.8
1973	1.1	- 4.4	1.5	- 7.7	7.7	8.0	2.4	4.3
1974	2.5	- 5.6	- 1.8	- 3.8	3.6	-15.1	7.9	- 4.5
1975	5.0	.8	6.6	3.6	16.3	- 5.9	.4	7.2

Note: See end of chapter for data source.

Data revealing the real growth in highway expenditures in constant dollars are displayed in Table 3.3 and in Table 3.4 on a per capita constant dollar basis. Expenditures for highways (1950 constant dollars), increased from 1950-75 at 3.9 percent and for per capita real growth, 2.5 percent.

Projected Expenditures for Highways -- United States. The huge highway programs recently completed are not projected to be duplicated in the next two decades. Most expenditures for highways will probably reflect the need for improvements and resurfacing rather than planning for and constructing major new highway networks. In light of the general assumptions previously enumerated, highway expenditures are projected to increase from $22.84 billion in 1975 and to $24.02 billion in 1980 -- a 1.0 percent increase. From 1980-85, the rate is projected to increase to 2.8 percent, indicating a dollar value of $27.57 billion in 1985. The average annual increase over the subsequent decade is projected to decline to 2.5 percent, so that expenditures for highways are projected to be $31.12 billion in 1990. The overall average annual increase from 1975-90 is projected to be 2.1 percent which is considerably below its historic long term growth rate of 7.4 percent. See Table 3.7. Consequently, expenditures for highways as a percent of total general expenditures, will decline from 5.3 percent in 1975, to 3.7 percent in 1980, and to 2.4 percent in 1990.

Data in Table 3.8 reveal the declining per capita

expenditures projected for the next decade and a half. Per capita expenditures for highways are projected to rise from $106 in 1975 and to $127 in 1990, reflecting a declining average growth rate of 1.2 percent. This is compared to its historic growth rate of 5.9 percent over the 1950-75 period.

An analysis of highway expenditures in constant dollars shows the effects of inflation. Data are enumerated in Table 3.9 for constant dollars expenditures and in Table 3.10 for per capita constant dollars. Highway expenditures (1950 dollars) are projected to decrease from $10.21 billion in 1975 to $7.87 billion in 1990 and from $48 per capita constant dollars in 1975 to $32 in 1990.

Projected Expenditures for Public Welfare -- United States

In 1950, expenditures for public welfare[1] were $2.96 billion increasing to $39.40 billion in 1975. Each decade expenditures more than doubled so that the average annual growth rate from 1950-75 was 10.9 percent. The growth rate from 1970-75 was 17.6 percent. See Table 3.1. Public welfare expenditures accounted for ever increasing shares of total general expenditures as indicated in Table 3.6. From 2.9 percent in 1953, public welfare expenditures increased its

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[1] For a full discussion of basic concepts and termonology and of the classification of public welfare, see, U.S. Bureau of the Census, Census of Governments, Historical Statistics on Governmental Finances and Employment.

share of general expenditures three-fold to 9.1 percent in 1975. Figure 3. graphically portrays the yearly percentage increase curve for public welfare expenditures. When analyzed on a per capita basis, public welfare expenditures increased just as dramatically as total welfare expenditures. In 1950, these per capita expenditures amounted to $20 increasing to $185 in 1975 for a 9.4 percent average annual growth rate. The rate for 1970-75 was 16.7 percent. See Table 3.2.

Expressing public welfare expenditures in constant dollars reveals the same dramatic increases as did current dollars. See Table 3.3. In 1950, public welfare expenditures in constant dollars amounted to $2.96 billion, increasing to $17.61 billion in 1975 for a compound annual average growth rate of 7.4 percent. Despite the severe inflationary rise in the early seventies, the real growth of public welfare expenditures (1950 constant dollars) from 1970-75 was 10.2 percent. Table 3.4 enumerates per capita welfare expenditures in constant dollars. The increase was still substantial considering both increases in population and inflation. From $20 in 1950 per capita expenditures in constant dollars increased to $83 in 1975, reflecting a real per capita growth rate of 5.9 percent. The real increase was even greater over the past five years, 9.4 percent.

Projected Expenditures for Public Welfare -- United States. The projected number of welfare recipients was assumed to increase or decrease in light of the assumptions made on rates of unemployment and the increase in the number of elderly

persons. These assumptions were specifically stated previously in the general discussion on expenditures. In light of these assumptions, public welfare expenditures are projected to increase over the projection period but not at the average annual growth rate of the past five years. Moreover, when expressed in terms of half decade growth rates, public welfare expenditures are projected to increase at declining but still substantial rates. From $39.40 billion in 1975, welfare expenditures are projected to increase to $74.55 billion in 1980 for a 13.6 average annual increase and to $135.62 billion in 1985 reflecting a slightly lower growth rate of 12.7 percent. In 1990, expenditures are projected to be $229.30 billion. Over the 1975-90 projection period, public welfare expenditures are projected to increase at a 12.5 percent rate. See Table 3.7.

Projected public welfare expenditures will continue its increasing share of total general expenditures. From 9.1 percent in 1975, public welfare expenditures are projected to account for 11.6 percent of total general revenues in 1980 and for 16.7 percent in 1990.

Table 3.8 contains data on projected per capita public welfare expenditures. Over the 1975-90 projection period, per capita expenditures are projected to increase at a 11.4 percent average annual increase from $185 in 1975 to $936 in 1990.

When public welfare expenditures are analyzed in terms of constant dollars, the data in Table 3.9 for constant dollar

expenditures and Table 3.10 for per capita constant dollar expenditures for public welfare reveal the following: public welfare expenditures are projected to increase from $17.61 billion in 1975 to $58.01 billion in 1990, reflecting a real growth average annual increase of 8.3 percent. Per capita expenditures are projected to increase from $83 in 1975 to $237 in 1990, a 7.3 percent increase.

Projected Expenditures for Natural Resources -- United States

The preservation of mankind's environment has been an issue of increasing concern to legislative bodies as well as to citizens. Over the last few decades, numerous laws have been enacted by Congress, state legislatures, and municipal governments dealing with the protection and preservation of the environment. Expenditures for natural resources[1] totalled $5.01 billion in 1950, increasing to $16.18 billion in 1975. This reflects a growth rate of 4.8 percent. It is considerably lower than the 7.1 percent of the past five years (1970-75). See Table 3.1. As a percent of total general expenditures, those for natural resources appear to be decreasing. From 8.3 percent of general expenditures in 1950, natural resource's share trended downward over the projection period to 3.7 percent in 1975. See Table 3.6. Figure 3. portrays the yearly percentage increase in expenditures for natural resources.

[1]For a full discussion of basic concepts and termonology and of the classification of natural resources, see, U.S. Bureau of the Census, Census of Governments, Historical Statistics on Governmental Finances and Employment.

Table 3.2 enumerates per capita expenditures for natural resources. Per capita expenditures increased from $23 in 1950 to $76 in 1975, a 3.4 percent average annual increase. Over the past five years (1970-75), the increase was 6.3 percent.

Expenditures for natural resources were deflated by the Purchasing Power of the Consumer Dollar Index. Tables 3.3 and 3.4 depict the constant dollar statistics. Taking into account the effects of inflation, constant dollar expenditures for natural resources increased at a 1.5 percent average annual rate over the 1950-75 projection period -- whereas per capita constant dollar expenditures increased at a 0.1 percent rate.

Projected Expenditures for Natural Resources -- United States. In light of increasing concern for mankind's environment but not really translated into increasing shares of total general expenditures, outlays for natural resources are projected to increase from $16.18 billion in 1975 to $22.63 billion in 1990. This indicates a 2.3 percent increase. Such a projected increase is half as much as its historic growth rate of 4.8 percent and about one third as great as its past five year's growth rate. See Table 3.7. As a percent of projected general expenditures, those for natural resources are projected to decrease from 3.7 percent in 1975, to 2.8 percent in 1980, to 1.7 percent in 1990. Table 3.8 contain projected per capita data for expenditures for natural resources.

Table 3.9 reveals the eroding effect on expenditures

for natural resources when such expenditures are translated into constant dollars. From $7.23 billion constant dollars in 1975, expenditures for natural resources expressed in constant dollars are projected to decline to $5.72 billion. The effect is not so much a function of inflation as it is a declining rate of projected increases in expenditures for natural resources. Table 3.10 reveals the effect of both inflation and population on expednitures for natural resources. Per capita constant dollar expenditures for natural resources are projected to decrease from $34 in 1975 to $23 in 1990.

Projected Expenditures for Interest on General Debt - United States

Interest on general debt as expednitures paid for the use of borrowed money. It excludes interest on federal securities held by federal agencies and funds. Interest, except that paid on debt incurred distinctively for local utility purposes, is classified under general expenditures. General expenditure for interest is not allocated to each particular function (i.e., education, highways, etc.) but exluded from these functional categories and classified all together as Interest on General Debt.

Table 3.1 reveals that interest payments on general debt was $4.86 billion in 1950, increasing to $33 billion in 1975. Interest on general debt increased at a 8.0 percent average annual rate over the 1950-1975 period but at a 12.4 percent rate over the past five years. Figure 3.11 depicts the yearly percen-

I For a full discussion of basic concepts and termonology and of the classification of interest on general debt, see U.S. Bureau of the Census, Census of Governments, Historical Statistics on Governmental Finances and Employment.

age increase curve for interest on general debt. When the expenditures are computed as percentage shares of total general expenditures, Table 3.6 reveals that interest accounts for 8.0 percent of total general revenue in 1950 and 7.6 percent in 1975. Consequently, interest payments on general debt have not consumed increasing shares of general revenue. Table 3.2 contains data on per capita interest payments for general debt. In 1950, these per capita expenditures amounted to $32, increasing to $155 in 1975. Per capita interest payments increased at a 6.5 percent rate from 1950-1975, but at a 8.3 percent rate over the past five years.

The real growth in interest payments on general debt can be assessed by translating current into constant dollars. Table 3.3 indicates that interst payments on general debt in constant dollars increased from $ 4.86 billion in 1950 to $14.75 billion in 1975, reflecting a real growth rate of 4.5 percent. Table 3.4 reveals the real growth for interest on a per capita basis.

Projected Interest Payments on General Debt - United States. Table 3.7 enumerates projections for interest payments on general debt. These expenditures are projected to increase to $51.09 billion in 1980 and to $113.08 billion in 1990. This reflects an 8.6 percent average annual increase from 1975-1990. Interest payments on general debt are projected to account for a slightly larger share of general expenditures, increasing from 7.6 percent in 1975, to 7.9 percent in 1980, and to 8.2 percent in 1990. Table 3.8 indicates that projected per capita interest payments will increase from $155 in 1975 to $461 in 1990 but the projected

rates of increase by half decades will decline, going from 8.2 percent from 1975-1980, to 7.7 percent from 1980-1985, and to 6.8 percent from 1985-1990.

Interest payments on general debt will increase despite the effects of inflation and population when expressed in constant dollars. Table 3.9 shows that the projected real growth in interest payments (constant dollars) are projected to increase from $14.75 billion in 1950 to $28.61 billion in 1990. Table 3.10 contains similar data on interest payments but on a per capita constant dollar basis. Per capita interest payments on general debt (constant dollars) are projecred to increase from $69 in 1975 to $117 in 1990 for an average annual increase of 3.6 percent.

Projected Payments for All Other General Expenditures - United States

Not all functional categories that could be separately listed under general revenues were so identified. All other general expenditures, then, became a catchall caregory for such functional classifications as postal service, hospitals, health, police, local fire protection, local sanitation, parts and recreation, housing and urban renewal, veterans services, general control, etc.

All other general expenditures totalled $15.99 billion in 1950, increasing to $130.35 billion in 1975. Table 3.1 contains yearly expedniture data. Yearly percentage increases in all other general expenditures are listed in Table 3.11 All other expendi-

tures accounted for 26.4 percent of toal general expenditures in 1950, increasing to 30.1 percent in 1975. See Table 3.6. Concerting all other general expednitures to per capita values indicates that per capita all other expenditures went from $105 in 1950 to $611 in 1975.

Constant dollar values for all other general expenditures are shown in Tables 3.3 and 3.4. Over the past quarter century, all other expenditures (constant dollars) increased from $15.99 billion in 1950 and to $58.27 billion in 1975. In per capita statistics, expednitures for all other purposes increased at a 3.9 percent real growth rate from $105 in 1950 to $273 in 1975.

Projected Payments for All Other General Expenditures-United States. In accordance with the underlying assumptions previously stated, all other expenditures are projected to increase from $130.35 billion in 1975, to $202.25 billion in 1980, and to $450.12 billion in 1990. Such expenditures were not projected to increase at the 13.0 percent rate they had over the past five years but at an 8.6 percent rate which reflects more closely its historic 8.8 percent growth rate. See Table 3.7. Per capita expenditures for all other purposes are also projected to increase more in terms of its historic growth pattern of 7.3 percent. The rate is slightly higher being 7.6 percent. See Table 3.8

When all other general expenditures are expressed in constant dollars, Table 3.9 shows that these expenditures (constant dollars) are projected to rise from $58.27 billion in 1975 to $113.88 billion in 1990, a real average annual growth rate of 4.6 percent. Table 3.10 indicates that per capita expenditures for

all other purposes in constant dollars will increase from $273 in 1975 to $464 in 1990. This reflects a 3.6 percent real growth rate for the 1975-1990 projection period compared to 3.4 percent from 1950-1975.

Projected Total General Expenditures - United States

Total general expenditures[1] for all governments in the United States were subsumed under the following functional classifications: (1) national defense; (2) education; (3) highways; (4) public welfare; (5) natural resources; (6) interest on general debt; and (7) all other general purpose expenditures.

Detailed data on expenditure growth rates, per capita values, constant dollars, yearly growth rates, percentage allocations of the various expenditure components, and projected values were previously discussed under the separate expenditure components.

Two approaches were utilized to project total general expenditures for all governments. The first procedure involved the projection of total general expenditures into its various components. The second dealt with the projection of each component of total general expenditures and the aggreagation of these components to obtain projected total general expenditure data. Both procedures resulted in projected base line data. These methods involved straight line regression, polynomial regression, natural logarithm regression, multiple order regression, and

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[1] For a full discussion of basic concepts and termonology and of the classification of general expenditures, see U.S. Bureau of the Census, Census of Governments, Historical Statisics on Governmental Fincances and Employment.

Fourier analysis regression.

Although the assumptions utilized to modify the base line projections were enumerated under each separate expenditure category, some of the general assumptions are worth repeating for emphasis. For example, both revenue and expenditure projections assumed that (1) there will be no major wars or depressions; (2) there will be no major changes in tax rates or tax structures (all such changes will be evolutionary rather than revolutionary); (3) federal revenue sharing with the states will continue; (4) unemployment will progress from 8.5 percent in 1975 to 7.8 percent in 1976; 6.8 percent in 1977; 5.8 percent in 1978; 5.1 percent in 1979; 4.7 percent in 1980; decreasing slightly each year until the level of 4.0 percent is reached in 1985, continuing into 1990; (5) the rate of productivity will increase at about 2.2 percent each year until 1980 and thence at a 2.6 percent level more consistent with long term historic growth rate; (6) inflation as measured by the Consumer Prince Index will increase at a slower rate than the previous five years - approximately 4.5 percent from 1975-1980, 4.2 percent from 1980-1985, and 4.0 percent from 1985-1990; (7) population in the United States will increase in accordance with Series II of the United States Census Bureau, reflecting an average annual growth rate of 9.25 percent from 1975-1990; (8) the growth of the population will be conditioned by a decline in fertility rates as indicated in Table 2.1; (9) the growth in output can be achieved without ecological disaster or serious deterioration, although diversion of resources for pollution

control will cause changes in the industrial mix of output;(10) the Gross National Product will increase at a real growth rate (constant dollars, 1950 = 100) of 3.9 percent to 1980, 3.8 percent to 1985, and 3.7 percent to 1990; and (11) personal income[1] will increase in accordance with its relationship between constant dollar personal income and constant dollar gross national product. The estimates of future economic activity in this report reflect baseline projections. These baseline projections are a best estimate of what can be expected to materialize if there are no policy changes of an unusual and unforeseen nature or magnitude in the factors which determined past trends. Of course, certain of the factors have been changing over time and will continue to do so in the future. The projections are in no sense a goal, an assigned share, or a constraint on economic activity.

Within the framework of these assumptions, total general expenditures for all levels of government in the United States are projected to increase from $432.55 billion in 1975 to $642.66 billion in 1980. See Table 3.1 This reflects a growth rate of 8.2 percent from 1975 to 1980. This rate is lower than the 9.5 percent from 1970-1975. General expenditures are projected to increase to $952.56 billion in 1985, reflecting an 8.2 percent growth rate. Expenditures are projected to increase still further over the 1985-1990 half-decade to $1,370,64 billion but at a lower growth rate of 7.5 percent. Over the entire projection period, general expenditures are projected to increase at an 8.0 percent

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1 See, "Population and Economic Activity in the United States and Standard Metropolitan Statistical Areas, Historical and Projected 1950-2020," Environmental Protection Agency, U.S. Dept. of Housing and Urban Development, Washington, D.C., July, 1972.

which reflects its long term histroical growth from 1950-1975.

An assessment of the impact of total general expenditures upon the population of the United States can be accomplished through an examination of per capita data. See Table 3.2. In 1975, per capita total general expenditures amounted to $2,026. Over the past quarter century (1950-1975) per capita general expenditures in the United States increased at a coumpound annual growth rate of 6.7 percent. We have projected per capita total general expenditures to increase at a 7.0 percent gowth rate from 1975-1990. The rates will not be the same over the projected three half decades. From 1975-1980, we project a growth rate of 6.2 percent; from 1980-1985, 7.1 percent; and from 1985-1990, 6.6 percent. Thus, per capita expenditures will rise from $2,026 in 1975, to $2,885 in 1980, and to $5,593 in 1990.

Total general expenditures for all governments may also be assessed in terms of its impact upon Gross National Product. In 1950 total general expenditures were 21.3 percent of Gross National Product. In 1950, total general expenditures were 21.3 percent of Gross National Product. One decade later, the ratio had increased to 28.1 percent, and in 1975, to 28.5 percent. Total general expenditures for all governments is projected to decline to 25.2 percent of Gross NationalProduct in 1980 and remain at this level in 1985, declining slightly to 24.7 percent in 1990.

Although reiterated many times previously, the effect of current dollar expenditure levels must be evaluated both in terms of inflation and population. Therefore, as was done with other projected measures, general expenditures for all governments

in the United States was deflated into constant dollars by means of the Purchasing Power of the Consumer Dollar Index. As indicated under the general assumptions, inflation was projected to increase at declining rates over the projection period. Table 3.9 reveals that total general expenditures are projected to increase in constant dollars from $193.35 billion in 1975 to $228.14 billion in 1980. By 1985, projected general expenditures in constant dollars will increase to $283.61 billion and by 1990 to $346.77 billion. Total general expenditures in constant dollars are projected to increase at an average annual rate of 3.9 percent despite inflation.

Table 3.10 contains projected per capita general expenditures in constant dollars. We project per capita general expenditures in constant to increase from $906 in 1975 to $1,024 in 1980, reflecting a 2.5 percent real growth rate. Because of a decreasing rate of inflation over 1980-1985, per capita general expenditures in constant dollars are projected to increase to $1,213 in 1985, at a higher average annual rate than in the preceding half decade. The figure is projected to reach $1,415 in 1990, reflecting an overall real growth rate of 3.0 percent from 1975 to 1990.

TABLE FOOTNOTES

CHAPTER 3

Table Number	Source
3.1	United States Bureau of the Census, 1902-1967, Census of Governments, 1967, Vol. 6, No. 5, Historical Statistics on Governmental Finances and Employment; 1968-1970; Governmental Finances in 1970-1971; Governmental Finances in 1971-1972; Governmental Finances in 1972-1973; Governmental Finances in 1973-1974; Governmental Finances in 1974-1975.
3.2	See data source, Tables 2.1, 3.1.
3.3	See data source, Tables 2.2, 3.1.
3.4	See data source, Tables 2.1, 2.2, and 3.1.
3.6	See data source, Table 3.1.
3.7	(a) See data source, Table 3.1. (b) From 1976 to 1990, United States Expenditures were estimated by staff members of Section 842, PL 83-80.
3.8	(a) See data source, Table 3.1, 2.1. (b) From 1976 to 1990, United States Expenditures were estimated by staff members of Section 842, PL 83-80.
3.9	(a) See data source, Table 3.1, 2.2. (b) From 1976 to 1990, United States Expenditures were estimated by staff members of Section 842, PL 83-80.
3.10	(a) See data source, Table 2.1, 2.2, and 3.1. (b) From 1976 to 1990, United States Expenditures were estimated by staff members of Section 842, PL 83-80.
3.11	See data source, Table 3.1.

CHAPTER 4

ACTUAL AND PROJECTED REVENUES FOR NEW YORK STATE

Chapter 4 deals with the projection of revenues both in current and constant dollars. The particular revenue measures used and the statistical methods employed are discussed in detail, accompanied by essential data tables, statistical formulas, graphs, charts, and figures to illuminate and illustrate the discussion.

THE NEW YORK STATE REVENUE SETTING

Total general revenue in New York State has been separated into the following categories: (1) personal income tax; (2) general business taxes; (3) consumption and use taxes; (4) transfer and other taxes; and (5) miscellaneous general revenues. As with United States revenue, insurance trust revenue was excluded because it must be held in trust for specific purposes such as employee retirement, unemployment insurance, etc.

Total General Revenue New York State

In 1950, total general revenue amounted to $905.4 million. One decade later general revenue increased to $1,998.6 million -- a 121 percent increase. Two decades later in 1970,

total general revenue almost tripled reflecting a 196 percent increase. Part of this dramatic increase was due to the imposition of sales tax starting in August of 1965. Even the first half of the seventies saw a 1.5 times increase in total general revenue -- a 56 percent increase. Historically over the past quarter century, general revenues in New York State increased at a compound annual growth rate of 9.72 percent. Total general revenues for New York State are contained in Table 4.1. All data are in current dollars. Table 4.1 also contains the component values of total general revenue from 1950 to 1975 inclusive.

Constant Dollars. Table 4.2 details the same information as does Table 4.1 except that the values are in constant dollars (1950 = 100). The real dollar increase in total general revenues was from $905.4 million in 1950 to $4,106.6 million in 1975 -- reflecting a compound annual growth rate in real dollars of 6.2 percent despite the sharp decline in the Purchasing Power of the Consumer Dollar.

Per Capita General Revenue. Table 4.3 contains per capita data for total general revenue and for its components. In 1950, per capita total general revenue was $60.90. One decade later the figure amounted to $118.67 -- slightly more than double. In 1970, per capita general revenue amounted to $324.09 -- almost tripling. By 1975, per capita general revenue continued its increase to $504.37. Thus over the quarter century from 1950 to 1975, per capita general revenue increased at a compound annual rate of 8.82 percent.

TABLE 4.1

TOTAL GENERAL REVENUES (CURRENT DOLLARS) AND ITS VARIOUS COMPONENTS, NEW YORK STATE, 1950 - 1975

YEAR (1)	TOTAL GENERAL REVENUE (1)	PERSONAL INCOME TAXES (3)	GENERAL BUSINESS TAXES (4)	CONSUMPTION AND USE TAXES (5)	TRANSFER AND OTHER TAXES (6)	MISCELLANEOUS REVENUE (7)
1950	905.4	262.9	251.0	321.0	42.0	28.5
1951	928.8	247.7	245.0	340.0	68.0	28.1
1952	1,110.1	297.0	307.0	370.0	98.0	38.1
1953	1,132.6	337.1	320.0	349.0	92.0	34.5
1954	1,150.8	351.1	304.0	354.0	123.0	18.7
1955	1,219.5	367.5	312.0	371.0	128.0	41.0
1956	1,378.6	447.3	335.0	394.0	158.0	44.3
1957	1,464.0	476.3	374.0	403.0	164.0	46.7
1958	1,532.0	513.5	391.0	413.0	163.0	51.5
1959	1,635.7	565.9	387.0	427.0	175.0	80.8
1960	1,998.6	756.6	399.0	554.0	219.0	70.0
1961	2,117.5	803.7	425.0	574.0	249.0	65.8
1962	2,366.3	834.6	453.0	591.0	259.0	228.7
1963	2,566.3	1,018.7	580.0	613.0	271.0	83.6
1964	2,752.3	1,136.3	581.0	641.0	314.0	80.0
1965	2,865.8	1,131.7	696.0	666.0	326.0	46.1
1966	3,325.8	1,270.9	570.0	1,128.0	300.0	56.9
1967	3,909.6	1,527.1	632.0	1,430.0	264.0	56.5
1968	4,244.1	1,787.8	610.0	1,513.0	266.0	67.3
1969	5,092.0	2,151.6	858.0	1,691.0	308.0	83.4
1970	5,911.8	2,486.4	962.0	2,076.0	296.0	91.4
1971	6,104.5	2,548.5	870.0	2,251.0	309.0	126.0
1972	6,785.3	2,518.0	1,149.0	2,618.0	349.0	151.3
1973	8,278.1	3,062.7	1,283.0	2,985.0	333.0	614.4
1974	8,524.5	3,205.3	1,296.0	3,153.0	321.0	549.2
1975	9,187.1	3,588.6	1,456.3	3,300.9	321.1	509.2

Note: All data are in millions of dollars. See end of chapter for data sources.

TABLE 4.2

TOTAL GENERAL REVENUES (CONSTANT DOLLARS, 1950 = 100) AND ITS VARIOUS COMPONENTS, NEW YORK STATE, 1950 - 1975

YEAR (1)	TOTAL GENERAL REVENUE (2)	PERSONAL INCOME TAXES (3)	GENERAL BUSINESS TAXES (4)	CONSUMPTION AND USE TAXES (5)	TRANSFER AND OTHER TAXES (6)	MISCELLANEOUS REVENUE (7)
1950	905.4	262.9	251.0	321.0	42.0	28.5
1951	860.1	229.4	232.4	297.2	38.9	62.2
1952	1,005.8	269.1	278.1	335.2	88.8	34.6
1953	1,018.2	303.1	287.7	313.8	82.7	30.9
1954	1,030.0	314.2	272.1	316.8	110.1	16.8
1955	1,096.3	330.4	280.5	333.5	115.1	36.8
1956	1,221.4	396.3	296.8	349.1	140.0	39.2
1957	1,251.7	407.2	319.8	344.6	140.2	39.9
1958	1,274.6	427.2	325.3	343.6	135.6	42.9
1959	1,349.5	466.9	319.3	352.3	144.4	66.6
1960	1,622.9	614.4	324.0	449.8	177.8	56.9
1961	2,117.5	646.2	342.0	461.5	200.2	467.6
1962	1,881.2	663.5	360.1	469.8	205.9	181.9
1963	2,009.3	800.7	455.9	481.8	213.0	57.9
1964	2,152.3	888.6	454.3	501.3	245.5	62.6
1965	2,183.7	862.4	530.4	507.5	248.4	35.0
1966	2,464.4	941.7	422.4	835.8	222.3	42.2
1967	2,814.9	1,099.5	455.0	1,029.6	190.1	40.7
1968	2,936.9	1,237.2	422.1	1,047.0	184.1	46.5
1969	3,340.4	1,411.4	562.8	1,109.3	202.0	54.9
1970	3,665.3	1,541.6	596.4	1,287.1	183.5	56.7
1971	3,626.1	1,513.8	516.8	1,337.1	183.5	74.9
1972	3,908.3	1,450.4	661.8	1,508.0	201.0	87.1
1973	4,486.7	1,660.0	695.4	1,617.9	180.5	332.9
1974	4,160.0	1,564.2	632.4	1,538.7	156.6	268.1
1975	4,113.9	1,604.1	650.8	1,475.5	148.4	235.1

Note: All data are in millions of dollars. See end of chapter for data sources.

TABLE 4.3

PER CAPITA TOTAL GENERAL REVENUES (CURRENT DOLLARS) AND ITS VARIOUS COMPONENTS, NEW YORK STATE, 1950 - 1975

YEAR (1)	TOTAL GENERAL REVENUE (2)	PERSONAL INCOME TAXES (3)	GENERAL BUSINESS TAXES (4)	CONSUMPTION AND USE TAXES (5)	TRANSFER AND OTHER TAXES (6)	MISCELLANEOUS REVENUE (7)
1950	$ 60.70	$ 17.62	$ 16.82	$ 21.52	$ 2.81	$ 1.93
1951	61.53	16.41	16.23	22.52	4.50	1.87
1952	72.65	19.43	20.09	24.21	6.41	2.51
1953	73.19	21.78	20.68	22.55	5.94	2.24
1954	73.44	22.40	19.40	22.59	7.85	1.20
1955	76.79	23.14	19.64	23.36	8.06	2.59
1956	85.65	27.79	20.81	24.48	9.81	2.76
1957	89.78	29.21	22.93	24.71	10.05	2.88
1958	92.88	31.13	23.70	25.04	9.88	3.13
1959	98.08	33.93	23.20	25.60	10.49	4.86
1960	118.66	44.92	23.69	32.89	13.00	4.16
1961	124.84	47.38	25.05	33.84	14.68	3.89
1962	137.68	48.56	26.35	34.38	15.07	13.32
1963	147.17	58.42	33.26	35.15	15.54	4.80
1964	156.07	64.43	32.94	36.34	17.80	4.56
1965	161.04	63.59	39.11	37.42	18.31	2.61
1966	185.51	70.89	31.79	62.92	16.73	3.18
1967	217.04	84.77	35.08	79.38	14.65	3.16
1968	234.36	98.72	33.68	83.54	14.68	3.74
1969	280.33	118.45	47.23	93.09	16.95	4.61
1970	324.09	136.30	52.73	113.80	16.22	5.04
1971	334.63	139.70	47.69	123.39	16.93	6.92
1972	371.93	138.02	62.98	143.50	19.13	8.30
1973	453.74	167.87	70.32	163.61	18.25	33.69
1974	467.19	175.67	71.02	172.80	17.59	30.11
1975	504.37	196.66	79.79	180.90	18.19	28.83

Note: All data are in millions of dollars. See end of chapter for data sources.

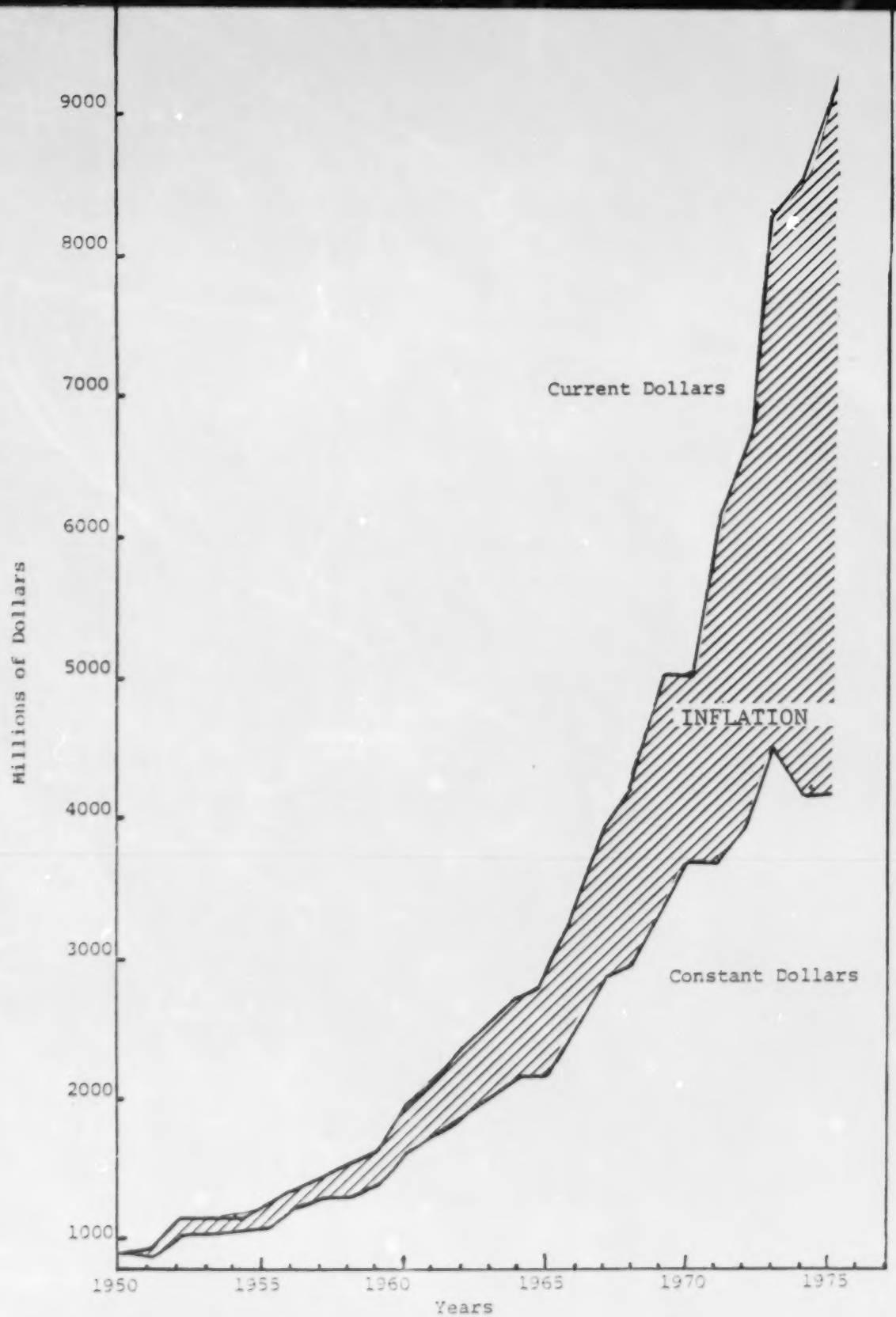

Figure 4.1 . New York State General Revenue in Constant and Current Dollars.

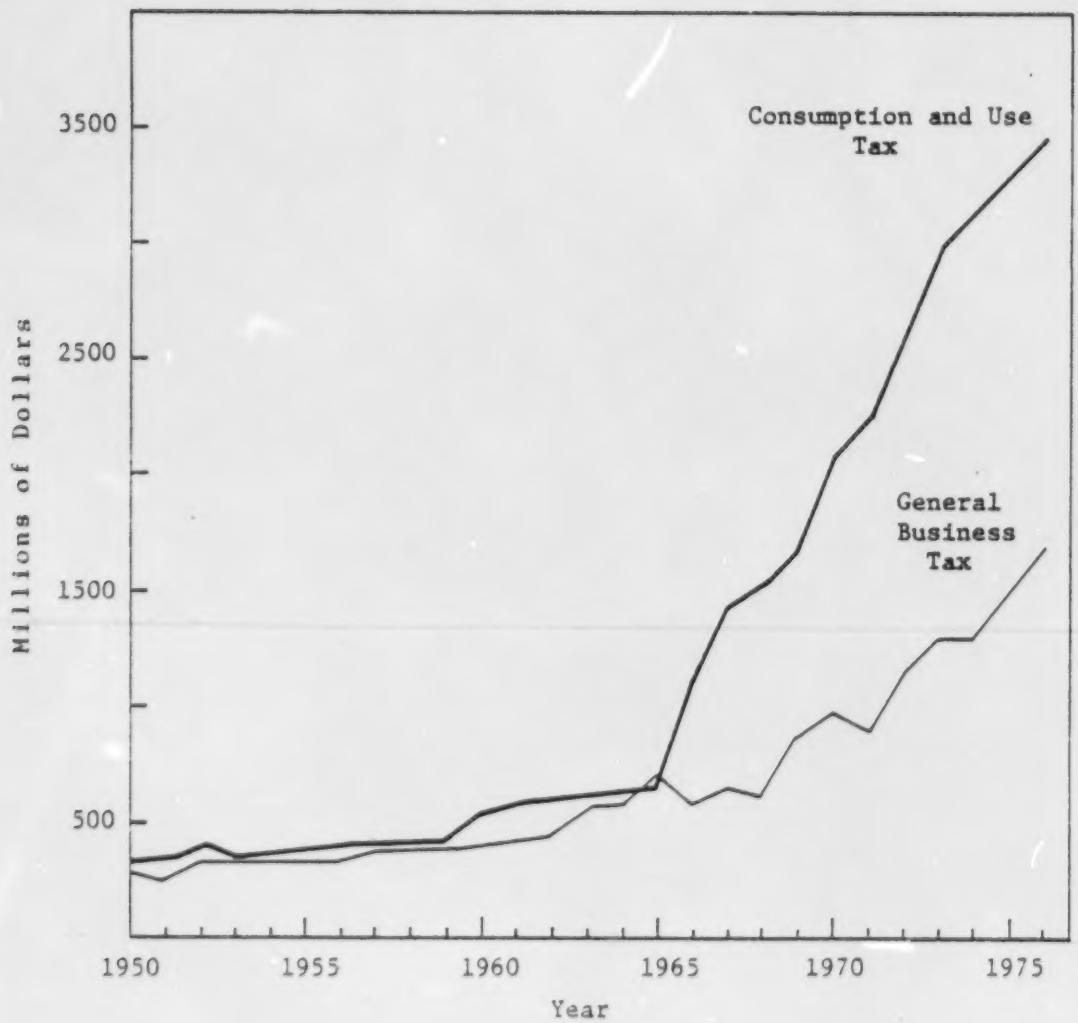

Figure 4.2. Trend Data for New York State Comsumption and Use and General Business Taxes in Current Dollars.

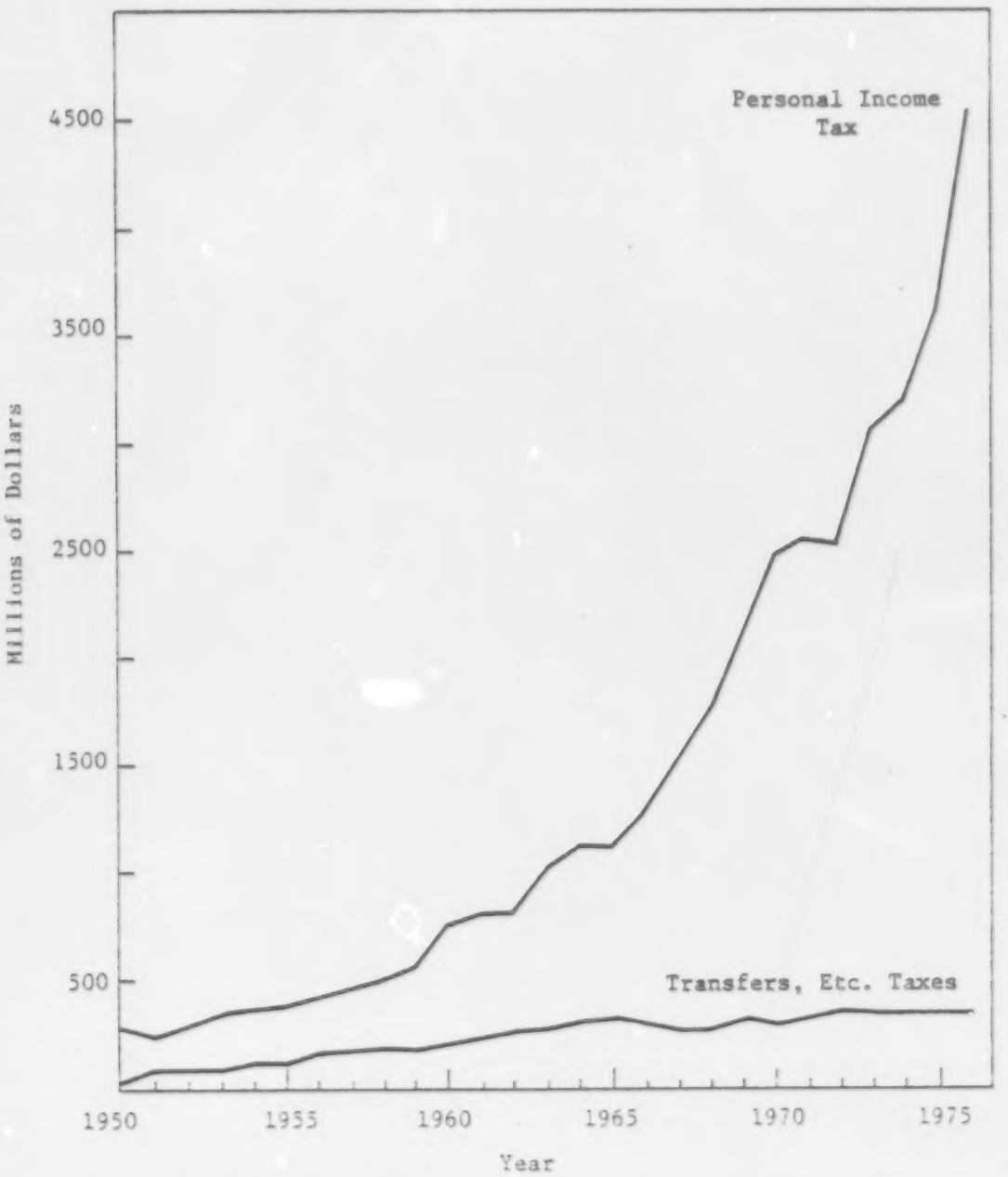

Figure 4.3. Trend Data for New York State Personal Income Tax and Transfers, Etc. Taxes in Current Dollars.

Even when current dollars are deflated into 1950 constant dollars, the rates of increase in total general revenue are impressive. In 1950, per capita general revenues in real dollars totalled $60.90 increasing to $96.36 in 1960, more than doubled to a total of $200.94 in 1970, and increased to $225.46 in 1975. In terms of real dollar growth, per capita general revenues increased at a 5.38 percent compound annual growth rate. See Table 4.4.

Crude Elasticity Ratios
New York State Revenue

As a guide for testing the reasonableness of New York State revenue and its various components, separate crude elasticity ratios were computed. These were done without regard to changes in tax rates or tax structures. Crude revenue elasticity ratios were derived from the ratio of the yearly percentage increase for a given tax in New York State divided by the yearly percentage increase in New York State personal income. These crude elasticity ratios for New York State taxes are listed in Table 4.5. When the crude elasticity ratio changes abruptly for a given tax it usually indicates a dramatic change in the rate or structure of that tax.

PROJECTED NEW YORK STATE REVENUES FOR TOTAL GENERAL REVENUE AND ITS VARIOUS COMPONENTS

As with United States revenue, New York State revenue was projected utilizing four different methods. The object was

TABLE 4.4

PER CAPITA TOTAL GENERAL REVENUES (CONSTANT DOLLARS, 1950 = 100) AND ITS VARIOUS COMPONENTS, NEW YORK STATE, 1950 - 1975

YEAR	TOTAL GENERAL REVENUE	PERSONAL INCOME TAXES	GENERAL BUSINESS TAXES	CONSUMPTION AND USE TAXES	TRANSFER AND OTHER TAXES	MISCELLANEOUS REVENUE
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1950	$ 60.70	$ 17.62	$ 16.82	$ 21.52	$ 2.81	$ 1.93
1951	56.98	15.19	15.03	20.85	4.17	1.74
1952	65.82	17.61	18.20	21.93	5.81	2.27
1953	65.80	19.58	18.59	20.28	5.34	2.01
1954	65.73	20.05	17.36	20.21	7.02	1.12
1955	69.04	20.80	17.66	21.00	7.24	2.34
1956	75.89	24.62	18.44	21.69	8.69	2.45
1957	76.76	24.97	19.61	21.13	8.59	2.46
1958	77.28	25.90	19.72	20.83	8.22	2.61
1959	80.91	27.99	19.14	21.12	8.65	4.01
1960	96.36	36.48	19.23	26.70	10.55	3.40
1961	100.38	38.09	20.16	27.20	11.80	3.13
1962	109.46	38.60	20.95	27.33	11.98	10.60
1963	115.23	45.91	26.14	27.63	12.21	3.34
1964	122.04	50.38	25.76	28.42	13.92	3.56
1965	122.71	48.46	29.80	28.51	13.95	1.99
1966	137.46	52.52	23.56	46.62	12.40	2.36
1967	156.27	61.03	25.25	57.15	10.55	2.29
1968	162.17	68.31	23.30	57.81	10.16	2.59
1969	183.90	77.70	30.98	61.07	11.12	3.03
1970	200.93	84.51	32.69	70.56	10.05	3.12
1971	198.77	82.98	28.33	73.29	10.05	4.12
1972	214.23	79.50	36.27	82.66	11.01	4.79
1973	245.92	90.98	38.11	88.68	9.89	18.26
1974	227.99	85.72	34.65	84.33	8.58	14.71
1975	225.45	87.91	35.66	80.86	8.13	12.89

Note: All data are in millions of dollars. See end of chapter for data sources.

TABLE 4.5

CRUDE ELASTICITY RATIOS FOR SELECTED NEW YORK STATE TAXES IN CURRENT DOLLARS

YEAR (1)	PERSONAL INCOME TAX (2)	GENERAL BUSINESS TAX (3)	CONSUMPTION AND USE TAX (4)	TRANSFERS ETC. TAX (5)	MISCEL-LANEOUS TAX (6)
1951	-0.732	-0.307	0.760	7.950	0.000
1952	4.275	5.475	1.909	9.545	6.715
1953	2.336	0.735	-0.984	- 1.062	- 1.823
1954	1.290	-1.553	0.445	10.467	-13.704
1955	0.762	0.414	0.756	0.640	0.119
1956	3.631	1.247	1.049	3.965	- 0.082
1957	1.133	2.034	0.399	0.663	1.191
1958	-0.089	-0.051	1.129	- 0.277	3.873
1959	0.011	-0.001	0.547	1.188	9.489
1960	8.151	0.749	7.184	6.073	- 3.280
1961	1.689	1.773	0.982	3.726	- 1.554
1962	0.682	1.165	0.524	0.710	43.686
1963	5.502	6.999	0.929	1.157	-16.899
1964	1.869	0.026	0.700	2.433	1.243
1965	-0.053	3.166	0.624	0.611	- 6.798
1966	1.727	-2.546	9.755	- 0.464	3.363
1967	2.598	1.403	3.453	7.892	- 0.226
1968	1.838	-0.374	0.624	0.081	2.112
1969	2.597	5.187	1.501	2.014	3.237
1970	2.440	0.073	3.580	- 0.613	1.310
1971	0.431	0.158	1.434	0.747	6.357
1972	-0.210	5.555	2.824	1.906	3.603
1973	6.250	1.691	2.033	- 0.423	44.471
1974	-1.469	0.135	0.748	- 0.479	- 1.429
1975	1.624	1.673	0.636	1.746	- 0.544

ing efficiency coefficient. Total general revenue was projected from the measure itself and then disaggregated to produce values for its various components. As a statistical check, total general revenue was also projected from projections of its various components through the process of aggregation. Such procedures produced base line data which were then modified in light of various assumptions[1] so indicated. Coefficients of forecasting efficiency are found in Table 4.6.

Projected Individual Income Taxes New York State

New York State income is composed of current revenues from taxes and miscellaneous receipts, proceeds from bond funds, and Federal revenue sharing receipts. Revenues for the fiscal years 1975-76 through 1989-90 have been projected on the basis of current statutes and administrative procedures.

In 1950, personal income taxes in New York State totalled $262.9 million, increasing to $756.6 million in 1960 - a 2.9 fold increase. One decade later, personal income taxes increased to $2,486.4 million, more than three times the 1960 value. By 1975, personal income taxes increased to $3,588.6 million. Over the past quarter century, 1950 -1975, income

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[1] For an excellent discussion of underlying assumptions involved in projecting New York State revenue see State of New York Five Year Projection of Income and Expenditures General Fund Fiscal Years 1976-77 Through 1980-81, Hugh L. Carey, Governor, Peter C. Goldmark, Jr., Director of the Budget, February 19, 1976 submitted as supplement to the Executive Budget as required by Article VII of the Constitution and Section 22 of the State Finance Law.

TABLE 4.6

COEFFICIENTS OF FORECASTING EFFICIENCY FOR VARIOUS NEW YORK STATE REVENUE MEASURES

REVENUE MEASURE (1)	REGRESSION EQUATION COEFFICIENTS STRAIGHT LINE Constant (2)	STRAIGHT LINE Current (3)	POLYNOMIAL Constant (4)	POLYNOMIAL Current (5)	NATURAL LOGARITHM Constant (6)	NATURAL LOGARITHM Current (7)
I. Total General Revenue Predicted From Itself	.753	.618	.833	.886	.861*	.929*
A. Personal Income Taxes	.776	.635	.791	.923*	.848*	.878
B. Consumption and Use Taxes	.638	.575	.768*	.739	.535	.870*
C. General Business Taxes	.658	.595	.697*	.793	.337	.845*
D. Transfer and Other Taxes	.271*	.667*	.228	.541	.196	.651

*The asterisk indicates the projective formula actually used to predict each revenue component.

taxes increased at a compound annual growth rate of 11.02 percent. Over the past half decade of the seventies, however, income taxes grew at the lesser rate of 7.61 percent. Table 4.1 contains data on personal income taxes in current dollars.

Of course, to measure real growth in personal income taxes, one should express current dollars in constant dollars. In 1950, individual income taxes collected in New York State totalled $262.9 million (1950 constant dollars). One decade later in 1960, they more than doubled to $614.4 million. Two decades later in 1970, personal income taxes, more than doubled again to $1,541.6 million (constant dollars). (See Table 4.2). Over the half decade of the seventies, income taxes did not increase greatly, totalling $1,604.1 million in 1975.

Per Capita Personal Income Taxes. Table 4.3 and Table 4.4 contain data on per capita personal income taxes both in current and constant dollars. In 1950, per capita personal income taxes totalled $17.62 increasing to $44.92 in 1960 -- a 2.5 fold increase. By 1970, per capita personal income taxes rose to $136.30 -- a three-fold increase over 1960. One half decade later in 1975, the figure was $196.66. Thus, per capita personal income taxes grew over the quarter century, 1950 - 1975, at a compound annual growth rate of 10.11 percent. Over the past five years, 1970 - 1975, the rate slowed to 7.61 percent.

When current dollars are deflated by the Purchasing Power of the Consumer Dollar Index, per capita personal income

taxes (1950 dollars) totalled $17.69 increasing to $36.48 in 1960 -- more than a two-fold increase. In 1970, the figure was $84.51 -- a 2.3 fold increase over 1960. By 1975, the rate of increase in per capita personal income taxes in constant dollars decreased greatly since the value was $87.91. Thus, over the past quarter century, 1950 - 1975, per capita personal income taxes grew at a compound annual growth rate of 6.62 percent but only 0.79 percent over the past five years.

Projected Individual Income Taxes -- New York State. As indicated previously, four different statistical procedures were utilized to compute regression equations. The equation having the highest forecasting efficiency coefficient was a natural logarithm curve. This curve was utilized to compute base line data for individual income taxes from 1976 to 1990.

Over the quarter century, 1950 - 1975, individual income taxes grew at a compound annual rate of 7.50 percent but only at 0.79 percent over the past half decade when growth was expressed in 1950 constant dollars.

The base line data were modified in accordance with a number of underlying assumptions, examination and analysis of certain trend data. For example, trends in New York State personal income, the Gross National Product, employment, etc., were analyzed.

Personal Income in New York State increased from $27.84 billion in 1950 to $118.96 billion in 1975 -- a 5.98 percent compound annual growth. This compares to a 7.08 growth rate for the United States as a whole. Considering the

last half decade, the 6.69 compound annual growth rate for personal income in New York was 6.69 percent compared to 9.24 percent for the nation. See Table 4.7.

Consider per capita personal income contrasts between the nation and New York State. In 1950, per capita personal income for New York State was $1,873, increasing to $6,564 by 1975 for a 5.14 percent compound annual growth rate. For the United States, in 1950, per capita personal income totalled $1,501, increasing to $5,902 in 1975, for a 5.63 percent growth rate. Consider now the past half decade growth rates: New York State's was 6.85 percent and the United States was 8.39 percent.

When New York State's per capita income relative to the United States is considered, the same pattern of decline is noticeable. For example, in 1950, the ratio of New York's per capita income relative to the United States was 1.27; for 1969, 1.23, and for 1971, 1.22. The U.S. Department of Commerce[1] projected that the ratio for 1980 would be 1.21 and for 1990 it would be 1.19.

The decline in New York State's economy with respect to the rest of the nation may be further documented by the statistical ratios of New York's percent of total personal income and percent of per capita personal income to the United States. In 1950, New York's share of the nation's personal income was 12.3 percent, declining to 9.5 percent in 1975, reflecting a compound

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[1] See U.S. Department of Commerce, Area Economic Projections 1990, Bureau of Economic Analysis, Government Printing Office, Washington, D.C.

TABLE 4.7

UNITED STATES AND NEW YORK STATE PERSONAL INCOME AND PER CAPITA PERSONAL INCOME (CURRENT DOLLARS) 1950 - 1975

YEAR	PERSONAL INCOME (In Billions)			PER CAPITA PERSONAL INCOME		
	United States	New York		United States	New York	
(1)	(2)	(3)	(a)*	(4)	(5)	(b)**
1950	$ 227.6	$ 27,841	12.2%	$1,501	$1,873	127.4%
1951	255.6	30,009	11.7	1,657	1,988	120.0
1952	272.5	31,396	11.5	1,736	2,055	118.4
1953	288.2	33,206	11.5	1,806	2,146	118.8
1954	290.1	34,275	11.8	1,786	2,188	122.5
1955	310.9	36,453	11.7	1,881	2,295	122.0
1956	333.0	38,608	11.5	1,972	2,398	121.6
1957	351.1	40,818	11.6	2,060	2,503	121.5
1958	361.2	41,715	11.5	2,083	2,529	121.4
1959	383.5	44,301	11.5	2,172	2,656	122.3
1960	401.0	46,135	11.5	2,228	2,739	122.9
1961	416.8	47,831	11.4	2,276	2,820	123.9
1962	442.6	50,535	11.4	2,381	2,940	123.5
1963	465.5	52,559	11.2	2,467	3,014	122.2
1964	497.5	55,987	11.2	2,599	3,174	122.1
1965	538.9	59,487	11.0	2,779	3,342	120.3
1966	587.2	63,717	10.8	2,998	3,554	118.5
1967	629.3	68,657	10.9	3,180	3,811	119.8
1968	688.9	75,041	10.8	3,447	4,143	120.2
1969	750.9	80,923	10.7	3,719	4,455	119.8
1970	808.3	86,070	10.6	3,945	4,702	119.2
1971	865.0	91,129	10.5	4,178	4,946	118.4
1972	944.6	96,390	10.2	4,523	5,213	115.3
1973	1,059.5	103,036	9.7	5,035	5,544	110.1
1974	1,159.5	110,784	9.5	5,472	5,979	109.3
1975	1,257.4	118,958	9.4	5,902	6,564	109.4

*Percent New York's Personal Income is of United States' Personal Income.

**Percent New York's Per Capita Personal Income is of United States' Per Capita Personal Income.

annual downward trend of 10.3 percent. With respect to per capita personal income, the downward trend is also evident. In 1950, New York State's percent of the nation's per capita personal income was 124.8 declining to 111.2 percent in 1975.

Nevertheless, the fiscal activity of New York State has not been drastically curtailed by the decline in economic activity relative to the nation as a whole. While employment in New York City has declined -- 2.3 percent from 1960 to 1974, employment in the rest of the state has increased 37.2 percent.[1]

In fact, we project personal income taxes to increase over the next decade and a half at a compound annual growth rate of 9.33 percent. This rate is lower than its 11.01 percent long term historical rate. See Table 4.8.

We foresee personal income taxes increasing from $3,588.6 million in 1975 to $5,608.2 million in 1980, and to $13,696.5 million in 1990. The percent of total general revenue derived from the personal income tax is also of interest here. See Table 4.9. In 1950, personal income taxes accounted for 29.0 percent of total general revenue increasing slowly to 41.3 percent of total general revenue in 1964. The imposition of the statewide sales tax in 1965 resulted in this figure dropping slightly. In 1975, personal income taxes accounted for 39.0 percent of total general revenue. The personal income tax is projected to be even more heavily relied upon in the

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[1] See Ray Bahl, "The Long Term Fiscal Outlook for New York State," State University of New York at Binghamton, November 8, 1976 for an excellent treatment of New York State's economic activity.

TABLE 4.8

NEW YORK STATE PROJECTED REVENUES IN CURRENT DOLLARS
(In Millions)

YEAR (1)	TOTAL GENERAL REVENUE (2)	PERSONAL INCOME TAXES (3)	GENERAL BUSINESS TAXES (4)	CONSUMPTION AND USE TAXES (5)	TRANSFER AND OTHER TAXES (6)	MISCEL-LANEOUS REVENUES (7)
1975 (ACTUAL)	$ 9,187.1	$ 3,588.6	$1,456.3	$3,300.9	$ 332.1	$ 509.2
			PROJECTED			
1976	9,893.5	3,923.8	1,562.0	3,466.1	378.9	562.7
1977	10,635.6	4,290.3	1,675.7	3,639.4	390.2	640.0
1978	11,433.2	4,691.0	1,797.7	3,821.3	401.5	721.7
1979	12,290.7	5,129.1	1,928.6	4,012.4	412.8	807.8
1980	13,212.5	5,608.2	2,069.0	4,213.0	424.1	898.2
1981	14,203.5	6,132.0	2,219.6	4,423.7	435.4	992.8
1982	15,268.7	6,704.7	2,381.2	4,644.8	446.7	1,091.3
1983	16,413.9	7,330.9	2,554.5	4,877.1	458.1	1,193.3
1984	17,644.9	8,015.6	2,740.5	5,120.9	469.3	1,298.6
1985	18,968.3	8,764.3	2,940.0	5,377.0	480.5	1,406.5
1986	20,390.2	9,582.9	3,154.0	5,645.8	491.8	1,515.7
1987	21,920.2	10,477.9	3,383.7	5,928.1	503.1	1,627.4
1988	23,564.2	11,456.5	3,630.0	6,224.5	514.4	1,738.8
1989	25,331.6	12,526.6	3,894.3	6,535.8	525.7	1,849.2
1990	27,231.4	13,696.5	4,177.8	6,862.5	536.9	1,957.7

Note: See end of chapter for data source.

TABLE 4.9

PERCENT SELECTED REVENUE MEASURES ARE OF TOTAL GENERAL REVENUE, NEW YORK STATE

YEAR (1)	PERSONAL INCOME TAXES (2)	GENERAL BUSINESS TAXES (3)	CONSUMPTION AND USE TAXES (4)	TRANSFERS AND OTHER TAXES (5)	MISCEL-LANEOUS REVENUES (6)
1950	29.0	27.7	35.5	4.6	3.2
1951	26.7	26.4	36.6	7.3	3.2
1952	26.8	27.7	33.3	8.8	3.4
1953	29.8	28.3	30.8	8.1	3.0
1954	30.5	26.4	30.8	10.7	1.6
1955	30.1	25.6	30.4	10.5	3.3
1956	32.4	24.3	28.6	11.5	3.2
1957	32.5	25.5	27.5	11.2	3.2
1958	33.5	25.5	27.0	10.6	3.3
1959	34.6	23.7	26.1	10.7	4.9
1960	37.9	20.0	27.7	11.0	3.5
1961	38.0	20.1	24.3	11.8	3.1
1962	35.3	19.1	25.0	10.9	9.7
1963	39.9	22.7	24.0	10.6	2.9
1964	41.3	21.1	23.3	11.4	2.9
1965	39.5	24.3	23.2	11.4	1.6
1966	38.2	17.1	33.9	9.0	1.7
1967	39.1	16.2	36.6	6.8	1.4
1968	42.1	14.4	35.6	6.3	1.6
1969	42.3	16.8	33.2	6.0	1.6
1970	42.1	16.3	35.1	5.0	1.5
1971	41.7	14.1	36.9	5.1	2.0
1972	37.1	16.9	38.6	5.1	2.2
1973	37.0	15.5	36.1	4.0	7.4
1974	37.6	15.2	37.0	3.8	6.4
1975	39.0	15.8	35.9	3.6	5.7

Note: See end of chapter for data source.

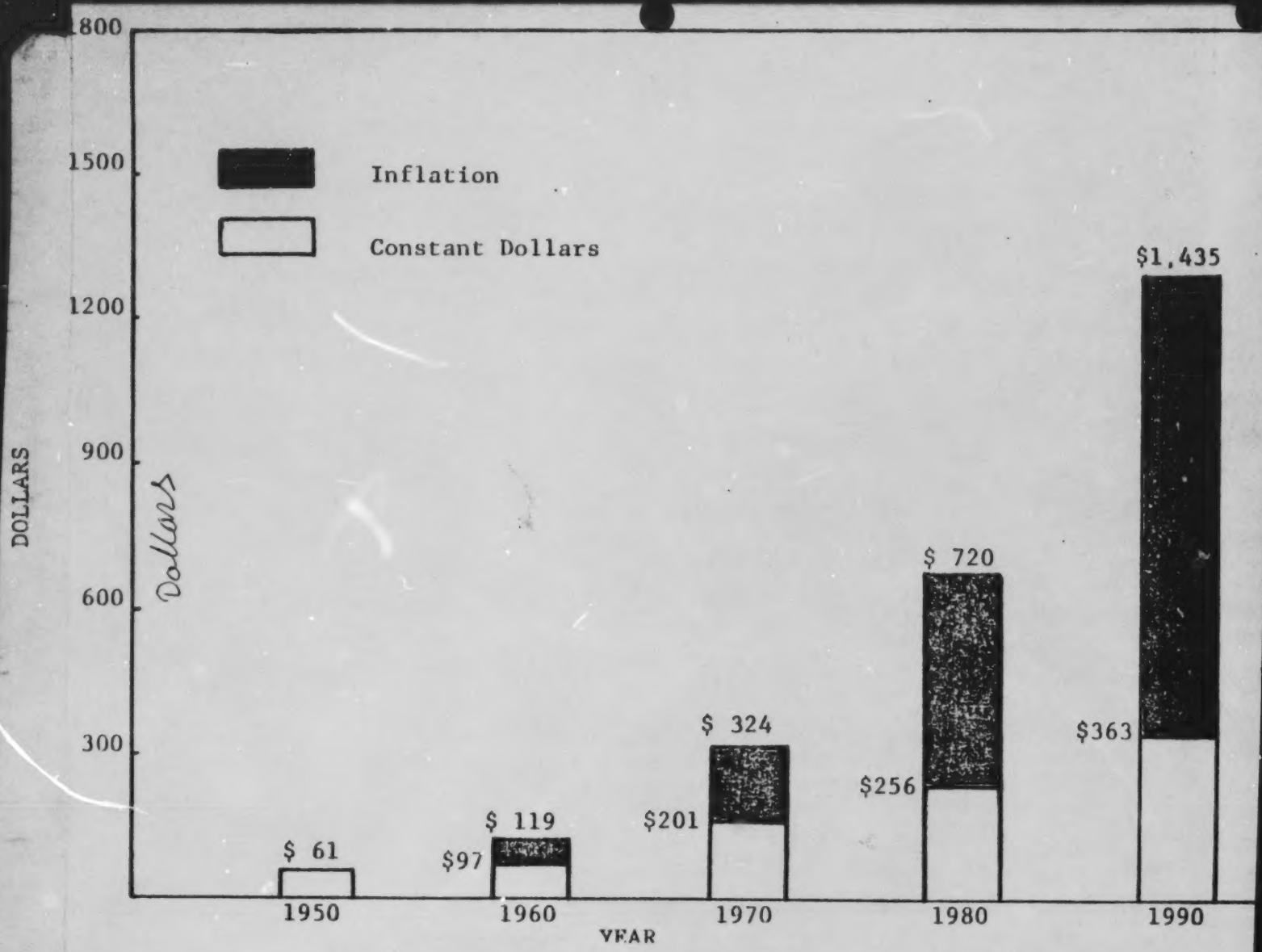
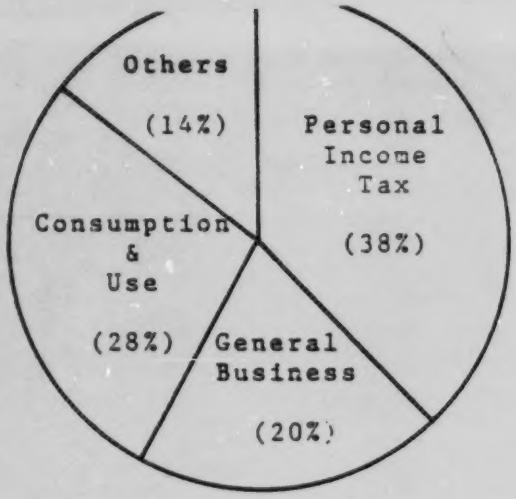
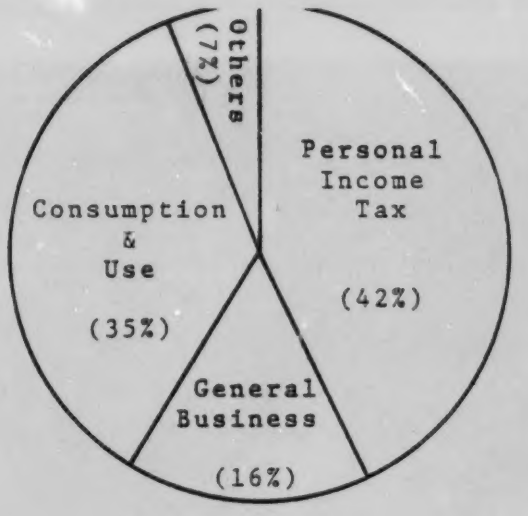


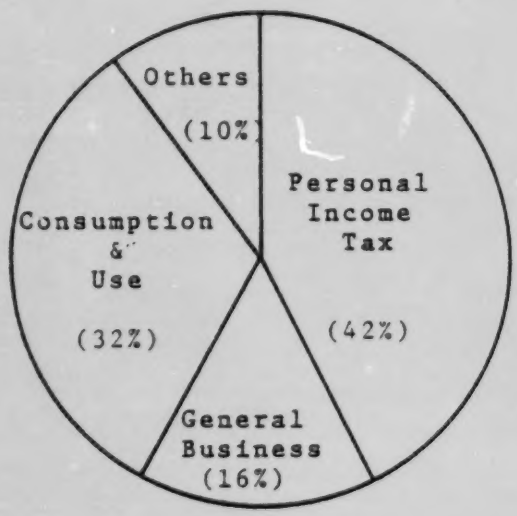
Figure 4.4. New York State Actual and Projected Per Capita Total General Revenue in Current and Constant Dollars (1950 = 100).



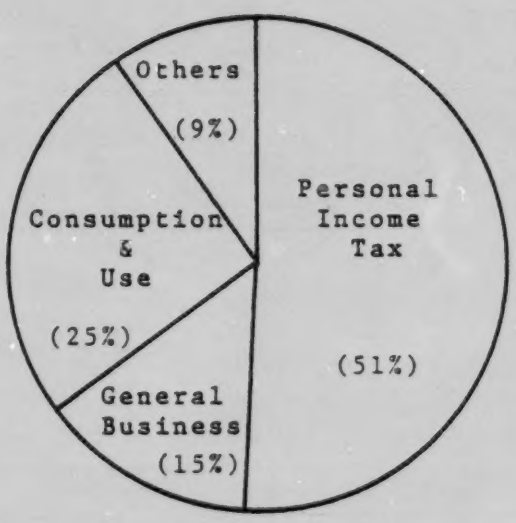
1960



1970



1980



1990

Figure 4.6. The Percent that Various Components are of Total New York State General Revenue in Selected Years, Actual and Projected.

future. By 1990, we project that personal income taxes will account for about 50.0 percent of all general revenues.

Another way of looking at the impact of personal income taxes upon New York State's economic activity is to compute per capita personal income taxes. See Table 4.10. As indicated previously, per capita personal income taxes in New York State amounted to $196.67 in 1975, increasing to $305.62 in 1980, and $721.74 in 1990. The long term historical trend, 1950 - 1975, growth rate was 10.13 percent. The rate for 1975 - 1990 is projected slightly lower at 9.05 percent. To put these economic statistics in true perspective, it is necessary to deflate current dollars into constant dollars.

Projected Personal Income Taxes in Constant Dollars. Personal income taxes in New York State were deflated by the Purchasing Power of the Consumer Dollar. Unlike current dollars, constant dollars is subject to two not one confounding force: (1) errors in projecting current dollars in this instance for personal income taxes; and (2) errors in projecting the purchasing power of the consumer dollar. As indicated earlier, personal income taxes in 1950 constant dollars increased over the past quarter century at a 6.24 percent rate. Although personal income taxes have been projected at a 9.33 percent rate for the period from 1975 to 1990, the purchasing power of the consumer dollar has been projected at a decreasing rate of 3.72 percent. Therefore, the real growth in personal income taxes reflects a 5.27 percent growth rate. Despite inflation, the real growth in personal income taxes is projected to increase

TABLE 4.10

NEW YORK STATE PROJECTED PER CAPITA REVENUE IN CURRENT DOLLARS
(In Millions)

YEAR (1)	TOTAL GENERAL REVENUE (2)	PERSONAL INCOME TAXES (3)	GENERAL BUSINESS TAXES (4)	CONSUMPTION AND USE TAXES (5)	TRANSFER AND OTHER TAXES (6)	MISCEL-LANEOUS REVENUES (7)
1975 (ACTUAL)	$ 503.49	$196.68	$ 79.80	$180.91	$18.21	$ 27.89
			PROJECTED			
1976	541.61	214.80	85.51	189.75	20.74	30.81
1977	581.56	234.59	91.63	199.00	21.34	35.00
1978	624.49	256.23	98.19	208.72	21.93	39.42
1979	670.56	279.84	105.22	218.91	22.52	44.07
1980	720.03	305.62	112.75	229.59	23.11	48.96
1981	771.68	333.15	120.59	240.34	23.66	53.94
1982	826.14	362.77	128.84	251.31	24.17	59.05
1983	886.38	395.88	137.95	263.37	24.74	64.44
1984	949.98	431.55	147.54	275.70	25.27	69.92
1985	1,018.10	470.41	157.80	288.61	25.79	75.49
1986	1,091.39	512.45	168.66	301.91	26.30	81.05
1987	1,167.89	558.26	180.28	315.85	26.80	82.07
1988	1,250.82	608.13	192.69	330.41	27.31	92.28
1989	1,339.73	662.50	205.96	345.66	27.80	97.81
1990	1,434.97	721.74	220.15	361.62	28.29	103.17

Note: See end of chapter for data sources.

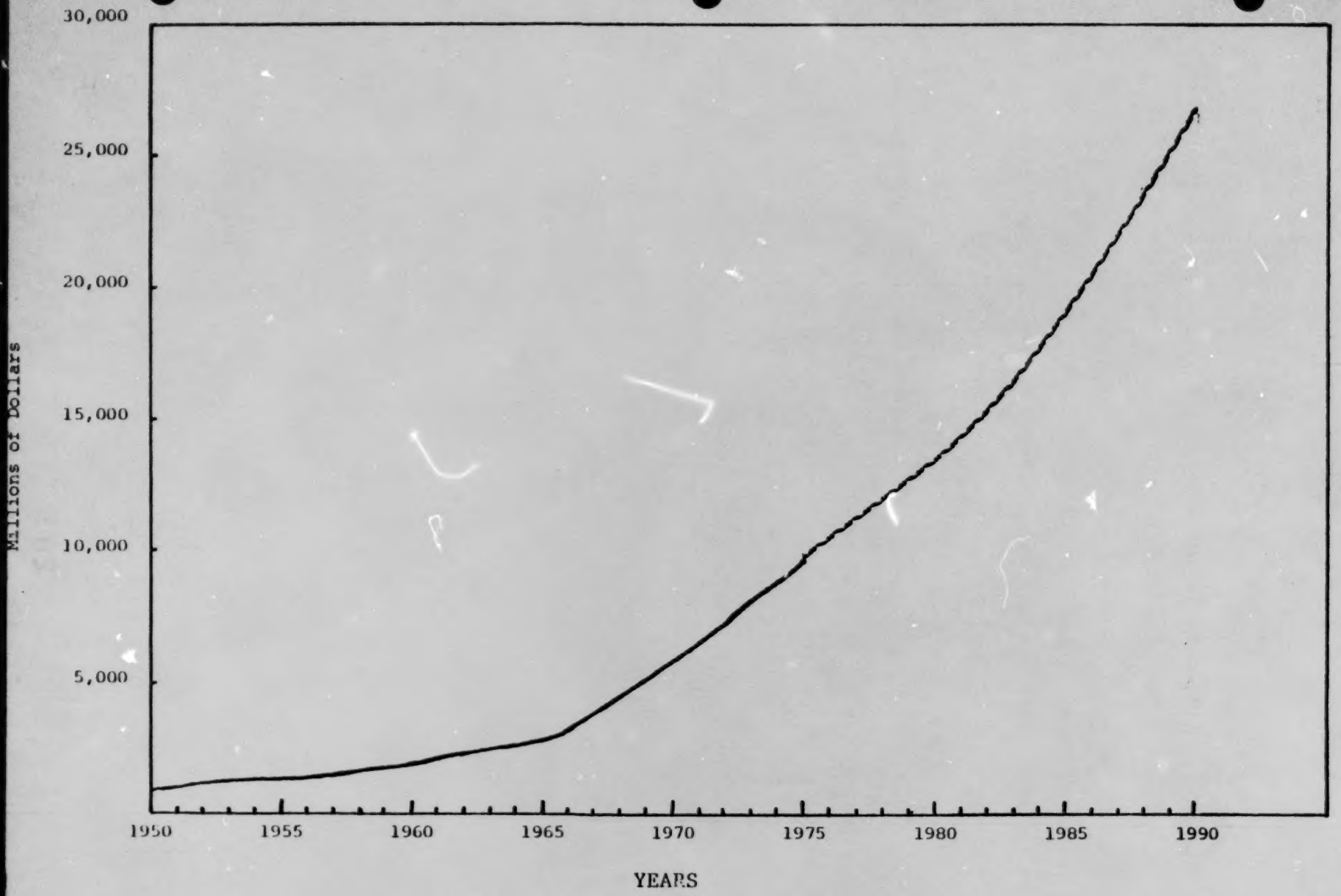


Figure 4.7 New York State Actual Total General Revenues, 1950-1975, and Projected Total General Revenues, 1976-1990, in Current Dollars.

from $1,604.1 million (1950 dollars) in 1975 to $1,990.9 million in 1980, and to $4,809.2 million in 1990. Consequently, the real growth rate from 1975 to 1980 is projected at a 4.42 percent rate. During the 1980's, the growth rate (constant dollars) is projected to increase at a higher rate -- 5.70 percent, reflecting an overall compound annual growth rate from 1975 to 1980 of 5.27 percent. See Table 4.11.

Although New York State will experience only a slight but steady population growth, per capita personal income taxes will continue to bear more heavily on each wage earner in the State. This is evident from the fact that per capita personal income taxes (1950 dollars) amounted to $87.91 in 1975 rising to $108.50 in 1980 for a real growth rate of 4.30 percent and increasing to $182.60 in 1990. The compound annual growth rate from 1975 to 1990 is projected to be 4.99 percent which is lower than its past quarter century long term historical rate of 6.62 percent. See Table 4.12.

Projected General Business Taxes New York State

In New York State, general business taxes[1] are those derived from corporation and utilities taxes, corporation franchise taxes, unincorporated business taxes, bank taxes, insurance taxes, etc.

In 1950, general business taxes in New York State

[1] For more descriptive definitions of general business taxes see the Annual Financial Reports of the Comptroller, State of New York.

TABLE 4.11

NEW YORK STATE PROJECTED REVENUE IN CONSTANT DOLLARS
(In Millions)

YEAR (1)	TOTAL GENERAL REVENUE (2)	PERSONAL INCOME TAXES (3)	GENERAL BUSINESS TAXES (4)	CONSUMPTION AND USE TAXES (5)	TRANSFER AND OTHER TAXES (6)	MISCEL-LANEOUS REVENUES (7)
1975 (ACTUAL)	$4,106.6	$1,604.2	$ 650.8	$1,475.5	$148.5	$227.6
			PROJECTED			
1976	4,115.4	1,632.2	649.8	1,441.8	157.6	234.0
1977	4,254.2	1,716.1	670.3	1,455.8	156.1	255.9
1978	4,402.5	1,806.3	692.2	1,471.4	154.6	278.0
1979	4,547.1	1,897.6	713.5	1,484.4	152.7	298.9
1980	4,690.3	1,990.8	734.5	1,495.6	150.6	318.8
1981	4,857.6	2,097.1	759.1	1,512.9	148.9	339.6
1982	5,039.2	2,212.8	785.9	1,532.9	147.4	360.2
1983	5,235.7	2,338.4	814.8	1,555.7	146.1	380.7
1984	5,452.7	2,477.0	846.9	1,582.5	145.0	401.3
1985	5,652.1	2,611.5	876.0	1,602.2	143.2	419.2
1986	5,872.8	2,760.1	908.4	1,626.1	141.6	436.6
1987	6,116.1	2,923.5	944.1	1,654.0	140.4	454.1
1988	6,361.8	3,093.0	980.0	1,680.5	138.9	469.4
1989	6,636.5	3,281.8	1,020.3	1,712.3	137.7	484.4
1990	6,888.8	3,464.8	1,056.9	1,736.0	135.8	495.3

Note: For constant dollars, 1950 = 100. See end of chapter for data source.

TABLE 4.12

NEW YORK STATE REVENUES PROJECTED PER CAPITA IN CONSTANT DOLLARS
(In Millions)

YEAR (1)	TOTAL GENERAL REVENUE (2)	PERSONAL INCOME TAXES (3)	GENERAL BUSINESS TAXES (4)	CONSUMPTION AND USE TAXES (5)	TRANSFER AND OTHER TAXES (6)	MISCEL-LANEOUS REVENUE (7)
1975 (ACTUAL)	$225.06	$ 87.92	$35.67	$80.86	$ 8.14	$12.47
			PROJECTED			
1976	225.29	89.35	35.57	78.93	8.63	12.81
1977	232.62	93.84	36.65	79.60	8.54	13.99
1978	240.47	98.66	37.81	80.37	8.44	15.19
1979	248.08	103.53	38.93	80.99	8.33	16.30
1980	255.60	108.49	40.03	81.50	8.21	17.37
1981	263.91	113.94	41.24	82.20	8.09	18.44
1982	272.65	119.73	42.52	82.94	7.98	19.48
1983	282.74	126.28	44.00	84.01	7.89	20.56
1984	293.57	133.36	45.60	85.20	7.81	21.60
1985	303.37	140.17	47.02	86.00	7.69	22.49
1986	314.05	147.60	48.58	86.96	7.57	23.34
1987	325.86	155.76	50.30	88.12	7.48	24.20
1988	337.69	164.18	52.02	89.20	7.37	24.92
1989	350.99	173.57	53.96	90.56	7.28	25.62
1990	363.01	182.58	55.69	91.48	7.16	26.10

Note: For constant dollars, 1950 = 100. See end of chapter for data source.

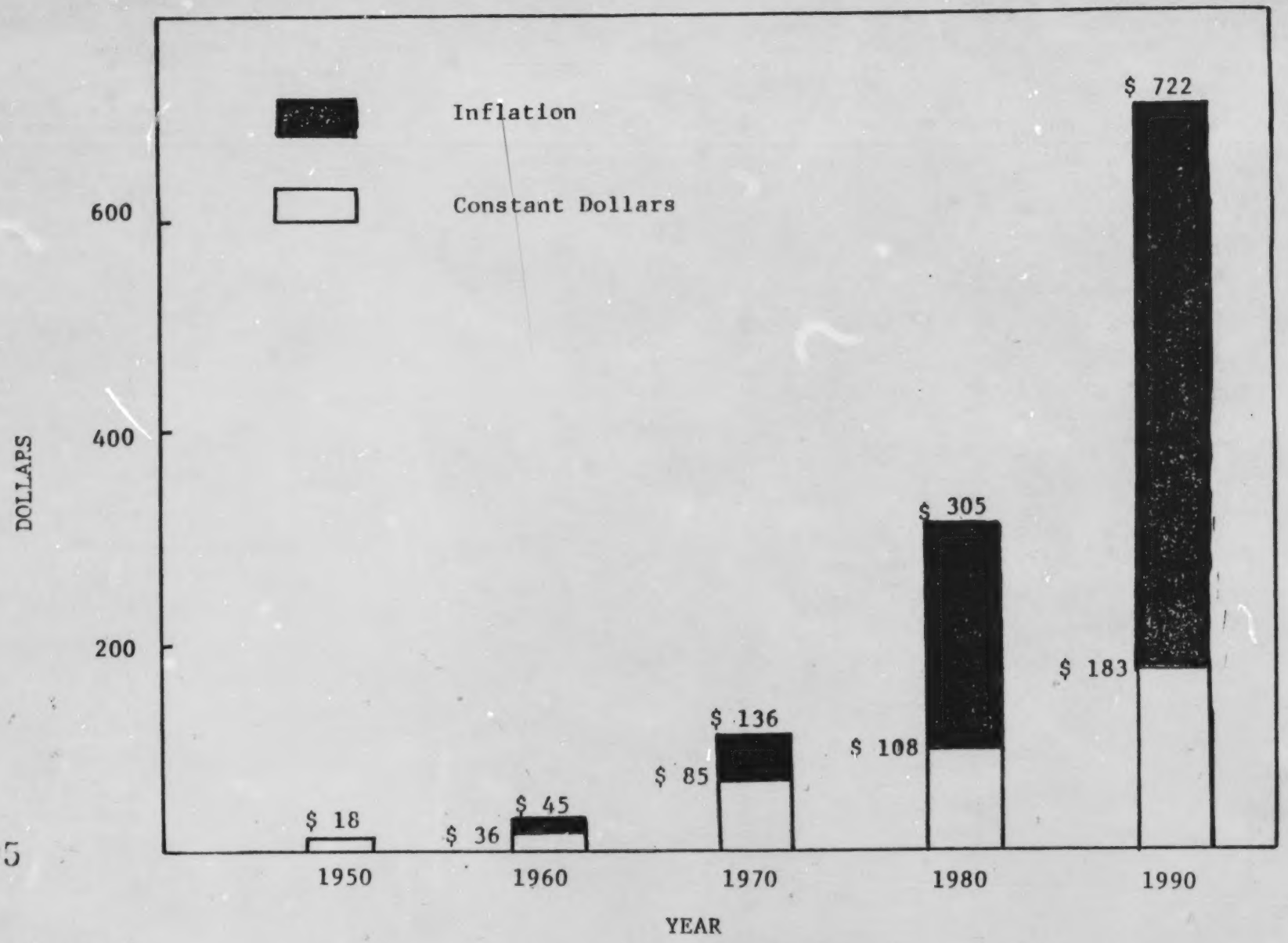


Figure 4.8. New York State Actual and Projected Per Capita Personal Income Tax Revenue in Current and Constant Dollars (1950 = 100).

totalled $251 million increasing to $399 million in 1960, to $862 million in 1970, and to $1,456 million in 1975. The compound annual growth rate from 1950 to 1975 was 7.29 percent. This compares with a 11.02 percent rate over the last half decade. See Table 4.1. There have been some rather dramatic surges in the business tax over the years. Most notably, taxes were up $248 million in 1969, or 40.7 percent over previous year. The greater part of the increase is attributed to a rise in business tax rates enacted by the 1968 legislature. Collections during 1971-72 were $1,149 million. This represents a rise of 32 percent over 1970-71 collections. Higher tax rates mainly accounted for the increase of about 26 percent in business tax collections this particular year. Overall, general business taxes have continued to increase and at a faster rate over the last half decade than over the past quarter century despite a decline in employment over the past half decade.

Consider next the real growth in general business taxes. Deflating current dollars by the Purchasing Power of the Consumer Dollar (1950 = 100) shows that general business taxes went from $251.0 million in 1950 to $324.0 million in 1960 to $596.4 million in 1970 and to $650.8 million in 1975. The real growth rate (1950 constant dollars) over the past quarter century was 3.88 percent whereas over the last five years the rate was 9.12 percent.

Per Capita General Business Taxes. Table 4.3 contains data on per capita general business taxes in New York

State. In 1950, general business taxes totalled 16.82 per capita increasing to $23.69 in 1960. One decade later the figure doubled to $52.73 in 1970. The last half decade per capita general business taxes rose to $79.79. Per capita general business taxes have increased at a compound annual growth rate faster over the last half decade compared to the past quarter century -- 8.64 percent compared to 6.42 percent.

Real per capita general business taxes (1950 constant dollars) went from $16.82 in 1950 to $19.23 in 1960 to $32.69 in 1970 to $35.66 in 1975. See Table 4.4.

Projected General Business Taxes -- New York State. General business taxes were subjected to four different statistical procedures. The procedure which yielded the highest forecasting coefficient was the one utilized to project base line data to 1990. In this instance the regression equation chosen was of the polynomial type. The base line data were modified in accordance with a number of underlying assumptions of which some are stated in an earlier section.

General business taxes as a percent of total general revenue has been declining over the past quarter century from 27.7 percent in 1950 to 15.8 percent in 1975, reflecting a negative 2.22 percent rate. Its proportion of total general revenue, however, has not changed much over the past half decade, being 16.3 percent in 1970 compared to 15.8 percent in 1975. Goldmark's[1] assumptions underlying the projections of

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[1] See Peter C. Goldmark, Jr., "State of New York Five Year Projection of Income and Expenditures General Fund Fiscal Years 1976-77 Through 1980-81." February 19, 1976 submitted as supplement to the Executive Budget as required by Article VII of the Constitution and Section 22 of the State Finance Law.

the general business taxes have been taken into account, particularly those concerned with corporate franchise taxes, employment, population growth, bank, insurance and other business taxes. Bahl[1] points out that there have been important structural changes in the pattern of revenue yield in New York State. Table 4.9, the percent each component of revenue is of total general revenue reveals this change particularly for general business taxes. Bahl also states that the decline in the size of the average taxing firm and tax payments related to employment "suggests that declining net business incomes may lie ahead."

Careful examination of the many forces affecting business activity in New York State lead to the conclusion that general business taxes would not increase at the 8.64 percent compound rate of the past half decade but at the lower rate of 6.77 percent, projecting a growth rate even lower than its long term historic growth of 7.28 percent.

We foresee general business taxes increasing from $1,456.0 million in 1975 to $2,069.0 in 1980, and to $4,177.8 million in 1990. Little change is projected in the proportion of revenue that general business taxes will yield. In 1975, its ratio was 15.8 percent; in 1980, its projected ratio will be 15.66 percent; and in 1990, 15.34 percent.

Another way of looking at the impact of general

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[1] See Ray Bahl, "The Long Term Fiscal Outlook for New York State," State University of New York at Binghamton, November 8, 1976.

business taxes is to analyze per capita data. From 1950 to 1975 per capita general business taxes increased from $16.82 to $79.79 -- a 6.43 percent growth rate. Considering population growth and projected general business taxes, per capita values will increase to $112.75 in 1980, and to $220.15 in 1990. The compound annual growth rate is projected over the 1975 - 1990 period to be 7.00 percent, slightly higher than its long term rate.

Projected General Business Taxes in Constant Dollars. General Business taxes in New York State were deflated by means of the Purchasing Power of the Consumer Dollar (1950 = 100). Constant dollars are affected not only by the level of projected current dollars but also by the degree of projected inflation. General business taxes are projected to increase from $650.8 million in 1975 and to $734.5 million in 1980 for a real growth rate of 2.45 percent. Because of the projected decline in the rate of inflation over the 1980's decade, general business taxes are projected to grow at a 3.70 percent rate (1980 to 1990). General Business taxes are projected to reach $1,057.0 million (1950 constant dollars) in 1990. Overall, the real growth rate from 1975 - 1990 is projected to be 3.29 percent, which is lower than its long term historic rate of 3.90 percent.

The impact of general business taxes may also be demonstrated by per capita values expressed in constant dollars. As indicated previously, per capita general business taxes in constant dollars was $35.66 in 1975. This figure is projected

to increase in real growth over the 1975 - 1990 period is 3.02 percent which represents a considerable decline from its 6.43 percent long term historic growth rate.

Projected Consumption and Use Taxes New York State

In New York State some of the taxes subsumed under the consumption and use category are sales and use tax, motor vehicle tax, motor fuel tax, alcoholic beverage tax, alcoholic beverage control licenses, cigarette tax, highway use tax, etc.[1]

In 1950, consumption and use taxes totalled $321 million in New York State. In 1966, the figure increased dramatically because of the imposition of the Statewide sales tax in August of 1965. This was accomplished by an increase in cigarette tax from 5¢ to 10¢ a pack, a 50 percent increase in Motor Vehicle Registration taxes and a new 2 percent state sales tax.[2] Total revenue, consequently, increased from $666 million in 1965 to $1,128 million in 1966. By 1975, consumption and use taxes amounted to $3,301 million yielding a growth rate of 9.77 percent. However, because of the imposition of this new sales tax, a more realistic growth rate would be that one obtained from 1966 rather than 1950. Interestingly, this yields a growth rate of 12.67 percent. However, when a growth rate is

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[1] For more descriptive definitions of consumption and use taxes see the Annual Report of the Comptroller, State of New York.

[2] The new tax became effective August, 1965 at a 2 percent rate. On April 1, 1969 the rate was increased to 3 percent and on June 1, 1971 to 4 percent and the base extend to receipts from sales of prepared food and drink of less than $1.00.

computed for the past five years the value is 9.72 percent which is close to its long term historic value of 9.77 percent. See Table 4.1.

When the effects of inflation are considered on consumption and use taxes, the real growth (1950 constant dollars) amounted to 6.29 percent over the 1950 - 1975 quarter century. Thus, consumption and use taxes (1950 dollars) went from $321.0 million in 1950 to $1,475.5 million in 1975. Because of large increases over the past five years, inflation has eroded the real growth rate (1970 - 1975) to 2.77 percent. The decline reflects the considerable slackening of economic activity in New York State from all forms of sales and excise taxes. For example, taxable retail sales per dollar of personal income went from 52.7 percent in 1966 to 48.0 percent in 1975.

Per Capita Consumption and Use Taxes. In 1950 per capita consumption and use taxes totalled $21.52 rising to $32.89 in 1960. One decade later in 1970, the per capita figure was $113.80 -- a 3.5 fold increase over 1960. By 1975, per capita consumption and use taxes reached $180.90. This reflected a rate of growth over the past quarter century of 8.89 percent. Despite the slackening of economic activity in New York State the compound annual growth rate over the past five years was 9.71 percent. Consumption and use taxes, however, only grew over the past year at a 4.69 percent rate.

Projected Consumption and Use Taxes - New York State. As with other revenue projections, consumption and use taxes were subjected to four different statistical procedures to

determine the regression equation having the highest forecasting efficiency. This turned out to be a regression equation of the polynomial type. This equation was used to project base line data for consumption and use taxes. These data were modified in accordance with a number of underlying assumptions some of which were previously stated.

Although taxable retail sales per dollar of personal income has declined over the past decade, sales tax revenues growth has continued to increase over the past three years at more than 7 percent. This trend is projected to continue over the next five years but decline slightly over the subsequent decade. Motor fuel consumption was projected to grow more slowly than in the past, reflecting a trend to vehicles obtaining more miles to the gallon. Motor vehicle receipts were projected to increase because of the large numbers of young adults entering the population pyramid. Conversely, cigarette and tobacco products taxes were projected to increase only slightly despite the increasing numbers of young adults of smoking age.

Consumption and use taxes accounted for 35.5 percent of total general revenues in 1950. See table 4.1. Over the decade of the fifties, this ratio declined to 27.7 percent in 1960. Over the 1960's the figure gradually rose back to the 35 percent level, reaching 35.1 percent in 1970. In 1972, consumption and use taxes reached its highest ratio, 38.6 percent. By 1975 the ratio declined to 35.9 percent.

Consideration of all these factors led to the pro-

jection of consumption and use taxes totalling $4,213.0 million in 1980 increasing to $6,862.5 million in 1990. See Table 4.8. Thus over the next decade and a half consumption and use taxes were projected to increase at a compound annual growth rate of 5.00 percent. On a per capita basis, consumption and use taxes were projected to increase from $180.90 in 1975 to $229.59 in 1980 reaching $361.62 in 1990. See Table 4.10. The projected annual growth rate is 4.72 percent which is about half the rate that prevailed from 1975 to 1990.

Projected Consumption and Use Taxes in Constant Dollars - New York State. Computing consumption and use taxes in constant dollars reveals the eroding effects of inflation upon the tax dollar. Clearly, if revenues increase less than inflation, then the goods and services bought with these tax dollars will be diminished. The effects of inflation are clearly visible when the value of consumption and use taxes are deflated by the Purchasing Power of the Consumer Dollar. For example, although consumption and use taxes increased from $3,301 million in 1975 to $4,213.0 million in 1980, the real increase in 1950 constant dollars was from $1,475.5 million in 1975 to $1,495.6 million in 1980. Whereas, consumption and use taxes in current dollars reflected a 5.00 percent growth rate inflation reduced the real growth rate to 0.27 percent.

Consumption and use taxes in constant dollars projected to 1990 reveals a real growth rate from 1975 to 1990 of 1.09 percent. This increased rate over that of the next five years reflects more the diminishing effects of inflation than the

effects of increasing consumption and use tax dollars.

On a per capita basis, consumption and use taxes (in constant dollars) reveals an increasing burden upon the consumer. In 1975, the per capita consumption and use tax in constant dollars was $80.87. The increase to 1980 is projected to be slight, amounting to $81.50. By 1990, the projected figure is $91.49, reflecting a compound annual growth of 8.26 percent which is higher than its long term historic trend of 5.44 percent.

Projected Transfer and Other Taxes - New York State

Revenue from transfer and other taxes[1] reflects collections from estate and gift taxes, pari-mutuel taxes, real estate transfer taxes, racing and boxing exhibition taxes, etc.

In 1950, transfer and other tax revenues totalled $42 million increasing to $219 million in 1960 - a more than five fold increase. One decade later revenues increased to $296. During the first half of the 1970's, transfer revenues increased only slightly amounting to $332.1 million in 1975. Transfer and other tax revenues increased over the past quarter century (1950 - 1975) at a compound annual growth rate of 8.62 percent. However, this rate decreased greatly over the past half decade to 2.33 percent.

There have often been some sporatic turns in

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[1] For a more descriptive definition of transfer and other taxes, see the Annual Financial Reports of the Comptroller, New York State.

transfers and other taxes over the years. For example, taxes declined from $323 million in 1965 to $297 million in 1966. The net decline resulted from an increased level of collections in estate tax and in pari-mutuel tax and a decrease of $57 million in stock transfer tax collections this year. In 1967 the bulk of decline in total transfers taxes may be attributed to the fact that 1966 revenues contained $24 million in stock transfer taxes whereas no such taxes are included in 1967 revenues.

When allowance is made for the eroding effects of inflation, the real growth in transfer and other taxes amounted to $106.4 million over the past quarter century. Transfer taxes, then, increased from $42.0 million to $148.4 million (1950 constant dollars). This reflected a real growth rate of 5.18 percent. Of interest here is the intense effects of inflation on transfer and other taxes over the past decade. It was not so much that transfer taxes did not increase rapidly but rather inflation increased over this past decade.

Projected Transfer and Other Taxes - New York State. As with the other categories of general revenue, transfer and other taxes were analyzed involving four different statistical procedures. The procedure which produced the highest forecasting efficiency coefficient was the one selected to project base line data for the period from 1976 to 1990. For transfer and other tax revenues, the straight line regression equation had the highest forecasting efficiency coefficient.

The percentage yield of transfer and other taxes as a

function of total general revenue has been erratic. Table 4.13, however, reveals the yearly percentage increases in transfer taxes went from 4.6 percent in 1950 to a 10 - 11 percent plateau over the 1955 to 1965 decade. Over the past decade the yield of transfers and other taxes cycled downward, reaching a 3.6 percent level in 1975.

Transfers and other tax revenues are projected to increase from $332.1 million in 1975 to $424.1 million in 1980, to $480.5 million in 1985 and to $536.9 million in 1990. This rate is considerably less than that experienced over the past quarter century. Only moderate gains in revenue are projected from estate levies; the effect of the Meadowlands race track in New Jersey should also slow the growth in pari-mutual revenues. Thus, revenues are projected to increase at a 3.25 percent compound annual growth rate. This rate is considerably less than its long term historic rate of 8.62 percent but more in line with its past half decade rate of 2.33 percent.

An analysis of per capita data reveals that transfer and other taxes totalled $2.81 in 1950 increasing to $18.20 in 1975 reflecting a growth rate of 7.76 percent. Over the next decade and a half per capita transfer taxes are projected to go from $18.20 in 1975 to $28.29 in 1990, a compound annual growth rate of 2.98 percent. This is in keeping with its growth rate over the past half decade.

Not only are per capita tax yields for transfer taxes projected to increase slightly to 1990 but its percentage yield of total general revenue is projected to continue the decline

of the previous decade. This is evident from the fact that in 1980 transfer taxes are projected to account for only 3.21 percent of total general revenue; 2.53 percent, in 1985; and 1.97 percent in 1990.

Projected Transfer and Other Taxes in Constant Dollars - New York State. As was done with the various other components of general revenue, transfer taxes were deflated by means of the Purchasing Power of the Consumer Dollar. In terms of 1950 constant dollars, transfer and other taxes are projected to increase to $150.6 million in 1980, decreasing to $143.2 million in 1985, and continuing the decline to $135.8 million in 1990. Clearly, the projected decline in real growth is a function of increasing inflation. An analysis of per capita transfer taxes in constant dollars reveals a similar decline. In 1975, per capita transfer tax revenues (constant dollars) yielded $8.13. For 1980, the comparable figure is projected to be $8.20 but for 1990 a decrease is projected to $7.16.

Projected Miscellaneous Revenue
New York State

Miscellaneous receipts[1] involve a myriad of revenue collections. The category includes refunds and disbursements, federal grants and reimbursements, lottery, land, building and property sold, transfers from other funds, adjustments of prior

[1] For a more descriptive definition of miscellaneous receipts, see the Annual Financial Reports of the Comptroller, New York State.

year's revenues, federal revenue sharing, sundry general funds, revenues of general departments, abandoned property receipts, income from investments and bank deposits, etc.

In 1950, miscellaneous revenues totalled $29 million. By 1975, miscellaneous revenues increased to $509.2 million but in a most erratic and haphazard manner. This may be seen from an examination of the trend data on miscellaneous revenues in Table 4.1 and Table 4.13. The long term historic growth rate (1950 - 1975) is 12.14 percent. Because of federal revenue sharing, however, miscellaneous receipts have increased dramatically over the past half decade rising from $91.0 million to $509.2 million. It should be noted that federal revenue sharing receipts account for almost half of all miscellaneous revenue.

An analysis of miscellaneous revenues expressed in 1950 constant dollars reveals that miscellaneous revenues went from $28.9 million in 1950 to $52.8 million in 1961, jumping to $181.8 million in 1961, falling back to $57.8 million in 1962, and increasing to $235.1 million in 1975. Thus, over the past quarter century, the real growth of miscellaneous revenue was 8.75 percent.

An analysis of per capita miscellaneous revenues shows revenues increasing from $1.93 in 1950 to $27.90 in 1975 -- for a growth rate of 11.28 percent (current dollars). See Table 4.3. Expressed in 1950 constant dollars, per capita miscellaneous revenues went from $1.93 in 1950 to $12.87 in 1975, reflecting a real growth rate of 7.88 percent. See Table 4.4.

TABLE 4.13

YEARLY PERCENTAGE GROWTH RATES FOR NEW YORK STATE GENERAL REVENUE AND COMPONENTS IN CURRENT DOLLARS

YEAR (1)	TOTAL GENERAL REVENUE (2)	PERSONAL INCOME TAXES (3)	GENERAL BUSINESS TAXES (4)	CONSUMPTION AND USE TAXES (5)	TRANFERS AND OTHER TAXES (6)	MISCEL-LANEOUS REVENUES (7)
1950						
1951	2.58%	- 5.8%	- 2.4%	5.9%	61.9%	1.7%
1952	19.52	19.9	25.3	8.8	44.1	27.6
1953	2.03	13.5	4.2	- 5.7	- 6.1	- 9.9
1954	1.61	4.2	- 5.0	1.4	33.7	-45.0
1955	5.97	4.7	2.6	4.8	4.1	119.4
1956	13.05	21.7	7.4	6.2	23.4	7.8
1957	6.19	6.5	11.6	2.3	3.8	7.3
1958	4.64	7.8	4.5	2.5	- 1.0	8.1
1959	6.77	10.2	- 1.0	3.4	7.4	58.4
1960	22.19	33.7	3.1	29.7	25.1	-13.7
1961	5.95	6.2	6.5	3.6	13.7	- 5.7
1962	11.75	3.8	6.6	3.0	4.0	248.1
1963	8.03	22.1	28.0	3.7	4.6	-67.8
1964	7.67	11.5	.2	4.6	15.9	9.0
1965	4.12	- .4	19.8	3.9	3.8	-42.8
1966	16.05	12.3	-18.1	69.4	- 8.0	24.4
1967	17.55	20.2	10.9	26.8	-12.0	- 2.3
1968	8.56	17.1	3.5	5.8	.8	20.8
1969	19.98	20.3	40.7	11.8	15.8	23.9
1970	16.10	15.6	12.1	22.8	3.9	9.0
1971	3.26	2.5	- 9.6	8.4	4.4	37.0
1972	11.15	- 1.2	32.1	16.3	13.0	20.9
1973	22.00	21.6	11.7	14.0	- 4.6	307.3
1974	2.98	4.7	1.0	5.6	- 3.6	-10.7
1975	7.96	12.0	12.3	4.7	3.4	- 4.1

Note: See end of chapter for data sources.

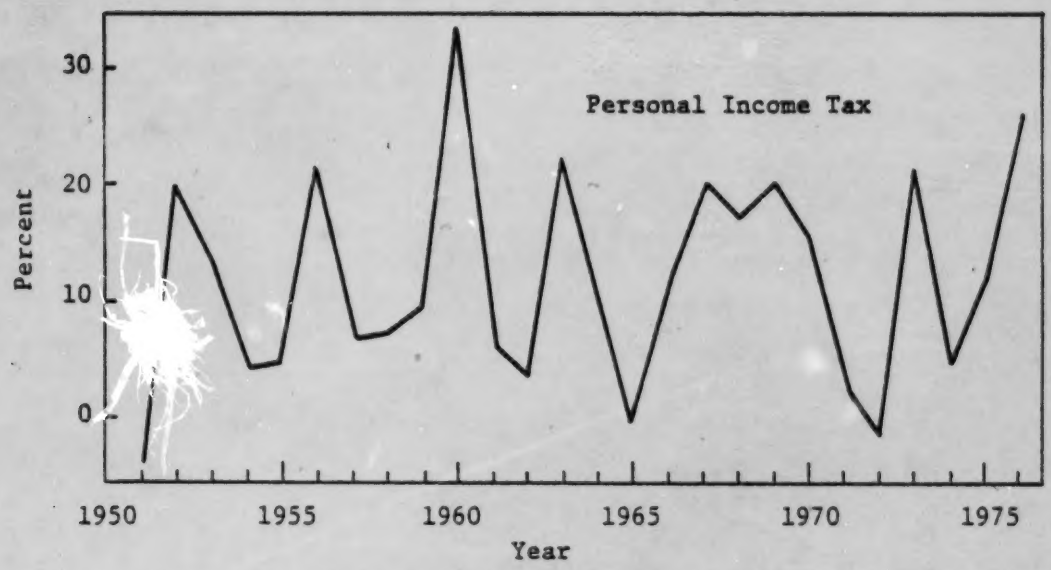

Figure 4.9. Trend Data for New York State Personal Income Tax Yearly Growth Rates in Current Dollars.

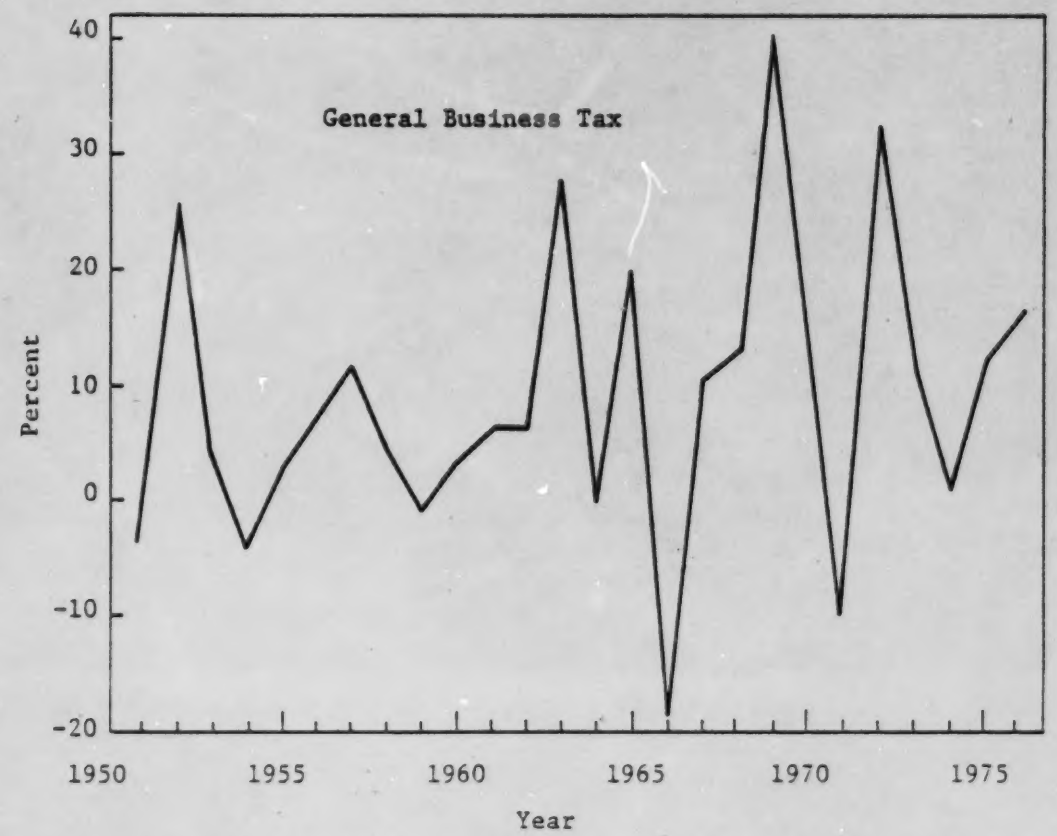

Figure 4.10. Trend Data for New York State General Business Tax Yearly Growth Rates in Current Dollars.

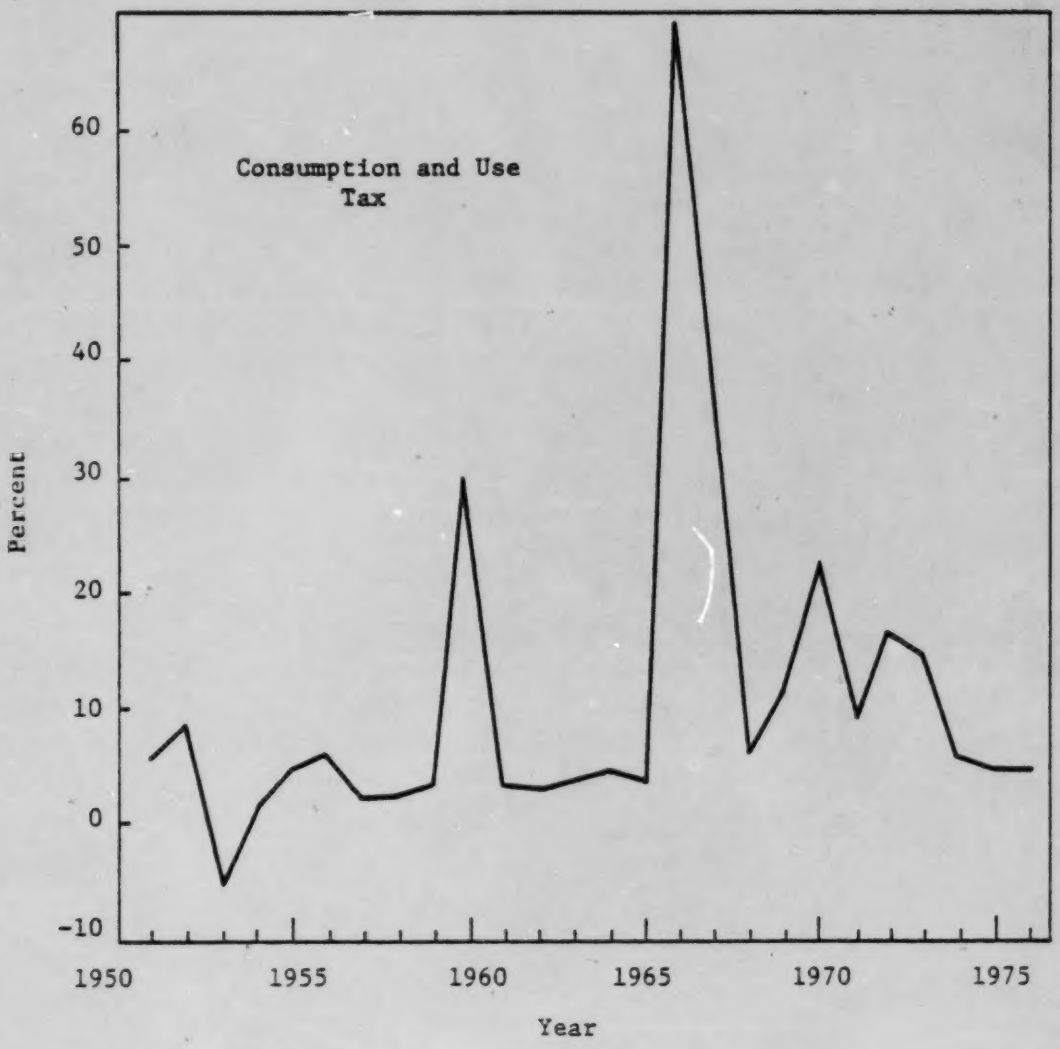

Figure 4.11. Trend Data for New York State Consumption and Use Tax Growth Rates in Current Dollars.

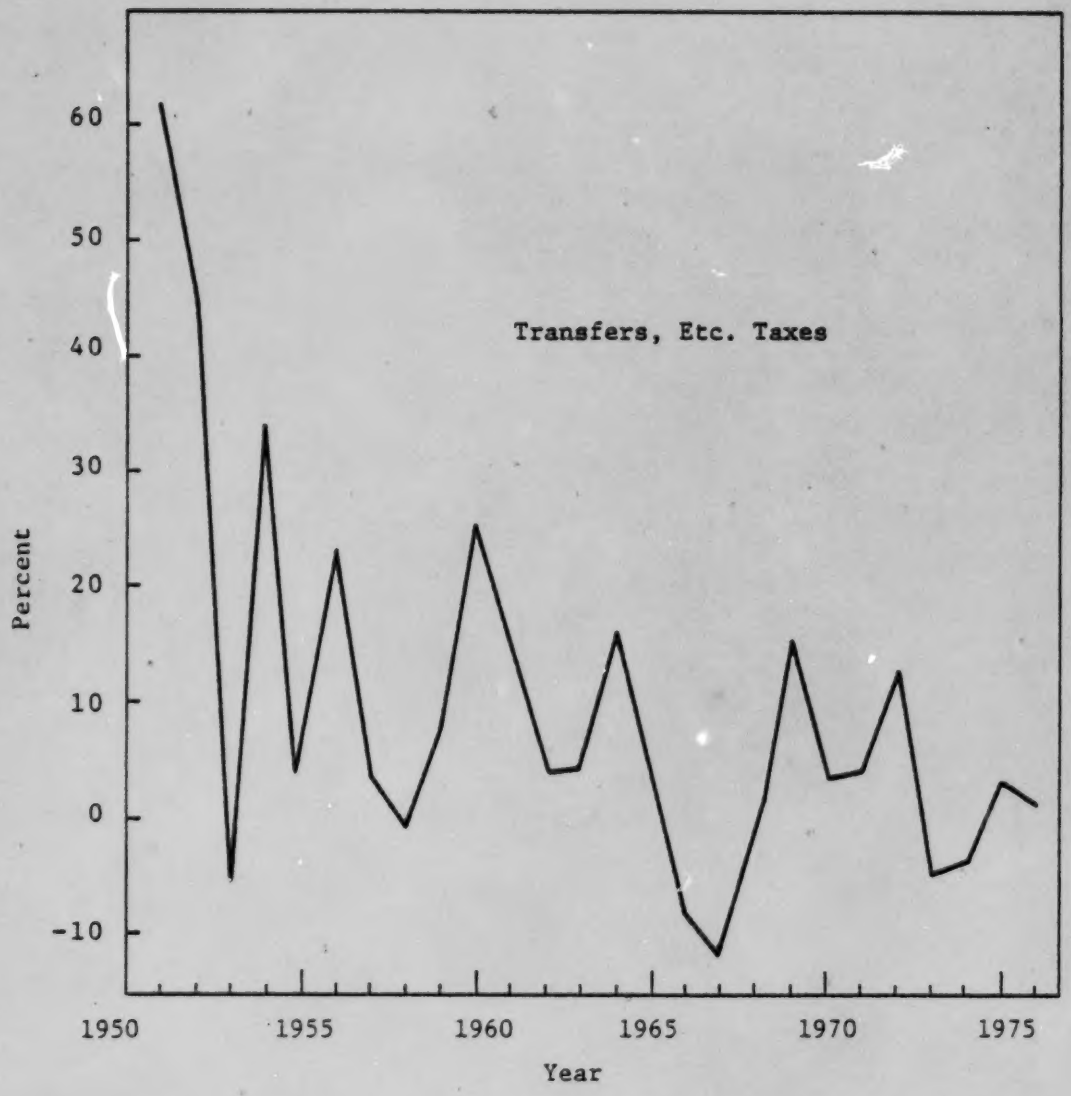

Figure 4.12. Trend Data for New York State Transfers, Etc. Taxes Growth Rates in Current Dollars.

Projected Miscellaneous Revenue - New York State. Projected miscellaneous revenues assumed that federal revenue sharing would increase modestly. Also, the New York State Lottery was assumed to be relatively successful. Other revenues were assumed to increase at rates consistent with past trends. Miscellaneous revenues were projected to increase from $509.2 million in 1975, to $898.2 million in 1980, to $1,406.5 million in 1985, and to $1,957.7 million in 1990. Miscellaneous revenues, then, are projected to increase at declining growth rates over the next three half decades. While the overall increase in miscellaneous revenues is at a 9.39 percent rate, the growth rate is 12.02 percent from 1975 to 1980, declining to 9.38 percent from 1980 to 1985, and decreasing further to 6.83 percent from 1985 to 1990.

On a per capita basis, miscellaneous revenues are projected to increase from $27.90 in 1975 to $103.17 in 1990. This rate of growth is 8.87 percent which is below its long term historic trend of 11.41 percent.

Percentage-wise, miscellaneous revenues are projected to yield 7.19 percent of total general revenues in 1990 compared to the 5.54 percent in 1950.

Projected Miscellaneous Revenues in Constant Dollars - New York State. Deflating miscellaneous revenue by the Purchasing Power of the Consumer Dollar shows the effects of inflation. In 1950, miscellaneous revenues totalled $235.1 million in 1950 constant dollars. In terms of real growth over the next five years, miscellaneous revenues are projected to be

$318.8 million in 1980, resulting in a real growth rate over the next half decade of 6.28 percent. Over the subsequent decade, 1980 to 1990, however, miscellaneous revenues are projected to increase at the declining rate of 4.50 percent to a total of $495.3 million in 1990.

On a per capita constant dollar basis, miscellaneous revenues amounted to $12.87 in 1950. Considering population growth and the effects of inflation, per capita miscellaneous revenues in constant dollars are projected to increase to $17.38 in 1980 and to $26.10 in 1990. The projected real growth over the next fifteen years, therefore, is 4.83 percent.

PROJECTED TOTAL GENERAL REVENUES - NEW YORK STATE

Total general revenue in New York State was divided into several categories. The components subsumed under total general revenue are as follows: (1) personal income taxes; (2) general business taxes; (3) consumption and use taxes; (4) transfer and other taxes; and (5) miscellaneous revenues. Each component was defined rather specifically in previous sections. Actual total general revenues covering the quarter century from 1950 to 1990 were discussed under the section entitled the New York State Revenue Setting. Detailed data on growth rates, constant dollars, per capita values, percentage yields of the various components, and projected values of each components were presented. At appropriate times, however,

certain of these statistics, whenever necessary to emphasis and illiminate important points, will be repeated.

Two approaches were utilized to project total general revenue for New York State. The first involved the projection of revenue from the measure itself and the disaggregation to total general revenue into its component parts. The second involved the projection of each component and the aggregation of the various components into total general revenue. Both procedures obtained projected base line data. As was typical in this study, four different methods were tested to assess equations having the highest forecasting efficiency coefficients. These methods involved straight line regression, polynomial regression, natural logarithmic regression, multiple order regression, and Fourier analysis regression.

Although the assumptions utilized to modify the base line data were enumerated previously, it would be most helpful to review what some of those assumptions were. Under each specific revenue component, detailed assumptions were enumerated. Some but not all of the detailed, specific assumptions are also reviewed. Some of these underlying assumptions worth repeating are as follows: there will be no major wars or depressions; no major program changes or improvements will be made; no major changes in tax rates or tax structures will occur; no major liberalizations of various state aid formulas will take place; federal revenue sharing will continue; population in New York State will grow very modestly; prices for most materials, good, and services will grow at their long

term historic growth rates; and the state's economy will develop as an outgrowth of the economic growth projected for the nation, previously enumerated in chapters 2 and 3.

Within the framework of these general assumptions and as well as those specifically detailed elsewhere in this study, total general revenues in New York State are projected to increase as enumerated in Table 4.8. From a total of $9,187.1 million in 1975, total general revenues are projected to increase to $13,212.5 million in 1980, a compound annual growth rate of 7.54 percent. During the next five years, 1980 - 1985, total general revenues are projected to increase to $18,968.3 million, a 7.50 percent rate, and for the five years, 1985 - 1990, general revenues will increase to $27,231.4. Over the next decade and a half total general revenues in New York State will increase at a compound annual growth rate of 7.51 percent. The rate is below its 9.72 percent of the past quarter century.

Of helpful interest here would be some comparative economic statistics between New York State and the United States. Over the past 25 years, the nation's Gross National Product increased from $284.8 billion in 1950 to $1,516.3 billion in 1975, reflecting a compound annual growth rate of 6.92 percent. Over the past five years, the GNP increased at a 9.19 percent rate. The Congressional Budget Office[1] projected the GNP would increase to $2,808.7 billion in 1980, reflecting

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[1] See Five Year Budget Projections: Fiscal Years 1978 - 1982. Congress of the United States, Congressional Budget Office, December, 1976.

a 13.12 percent growth rate. New York State's revenues were projected over this same period at a 7.50 percent rate. In this same publication, the Congressional Budget Office projected total federal receipts to increase at a rate of about 14 percent. The unemployment rate for the nation is projected to decrease to 7.6 percent in 1976 to a low of 4.8 percent in 1980 and to decrease still further to 4.1 percent in 1982. Inflation as measured by the Consumer Price Index is also expected to continue to increase from 161.2 in 1950, to 170.4 in 1976, and to 206.3 in 1980 for a 5.06 percent annual growth rate. The unemployment rate is projected to decrease from 7.6 percent in 1976 to 4.8 percent in 1980, and to 4.1 percent in 1982. The Bureau of Economic Analysis[1] projects per capita personal income (1967 constant dollars) in New York State to rise from $4,331 in 1971, to $5,785 in 1980, and to $7,338 in 1990. Over this same period United States per capita personal income (1967 constant dollars) is projected to increase from $3,544 in 1971, to $4,780 in 1980, and to $6,166 in 1990. Over the past two decades per capita personal income (1967 constant dollars) increased at about the same rate in both New York State and the United States. The projected increase for the 1980's is 2.58 percent compounded annually for the nation compared to New York State's 2.41 percent rate. Clearly, in light of trends in various economic indicators in the United

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[1] See U.S. Department of Commerce, Area Economic Projections 1990, Bureau of Economic Analysis, Washington, D.C.

States, the revenue projections for New York State are fiscally sound. That is, granted that (1) New York State's economic position relative to the rest of the nation is not as rosy as it once was; (2) New York can no longer provide any and all services at higher and higher levels; (3) the employment gap in New York has continued; (4) New York State's economy has stopped growing at previous decade's rates; and (5) the State of New York presently has, and is projected to have, above average per capita personal income reflecting above average wealth. With prudent, efficient, and sound management of its economy, New York State can still provide a level of services for its residents which exceeds that of most states.

Projected Per Capita Total General Revenue - New York State. In 1950, per capita total general revenue in New York State totalled $60.70. One decade later (1960) the figure was $118.66; two decades later (1970) the figure was $324.09 -- almost more than a three-fold increase. In 1975, per capita total general revenue amounted to $503.48. Over the past five years (1970-1975), per capita general revenues grew at a 9.21 percent growth rate compared to its long term historic rate of 8.83 percent.

Per capita total general revenue is projected to increase from $503.48 in 1975 to $720.03 in 1980 to $1,434.97 in 1990. Over the next five years (1975-1980) per capita total general revenue is projected to increase at a compound annual growth rate of 7.42 percent and from 1980-1990 at a 7.14 percent rate.

When per capita total general revenue is expressed in constant dollars, the real growth rate over the past quarter century is 5.39 percent and its projected real growth (1975 - 1990) is 3.23 percent. Per capita total general revenue is projected to increase from $225.45 in 1975, to $255.61 in 1980, and to $363.05 in 1990.

Projected Total General Revenue in Constant Dollars - New York State. Expressing total general revenue in constant rather than in current dollars reveals the degree to which inflation has eroded the purchasing power of the revenue dollar. Sometimes, even though revenues have increased appreciably, the rate of increase has failed to keep pace with the rate of increase of inflation. Thus, the ability of various agencies to increase services to meet expanding needs is impaired. With respect to total general revenue in New York State (constant dollars) the figure amounted to $905.4 million in 1950 increasing to $1,622.9 in 1960 for a real growth increase of 6.01 percent. From 1960 to 1970, total general revenues in New York State increased from $1,622.9 to $3,665.3, reflecting a real growth increase of 8.49 percent. From 1970 to 1975, revenues increased at a much lower rate than inflation and the consequence was a real growth rate of only 2.34 percent.

With respect to the future, inflation has been projected at a conservative rate. When inflation is coupled with current revenue increases, total general revenue in New York State in constant dollars is projected to increase from $4,113.9 million in 1975, to $4,690.4 million in 1980, and to $6,889.5

million in 1990. Over the next five years (1975 - 1980) total general revenue is projected to increase at a real growth rate of 2.66 percent while the rate over the decade 1980 - 1990 is projected to be 3.92 percent. Although there will be some real growth in general revenues in New York State, it is exceedingly tenuous. An accelerating rate of inflation could easily wipe out this projected real growth increase. Consequently, it is imperative that various governmental agencies be attuned to increasing services and benefits in selected areas, particularly those areas which yield the greatest good for the most people in the State of New York. Not all state agencies and municipal governments will be able to increase goods and services at past levels. Some agencies will undoubtedly have to mark time over the next decade and a half, while some will actually have to deal with cutbacks in services. Few agencies will probably increase services and only those of the utmost necessity.

TABLE FOOTNOTES

Table Number	Source
4.1	Annual Financial Report of the Comptroller, State of New York, Fiscal Years 1949-50 - 1974-1975.
4.2	See data source, Table 2.2, 4.1.
4.3	See data source, tables 2.1, 4.1.
4.4	See data source, Tables 2.1, 2.2, and 4.1.
4.7	(a) United States Department of Commerce, Survey of of Current Business, 1950-1975, Bureau of Economic Analysis. (b) United States Department of Commerce, Bureau of the Census, State Government Finances, 1950-1975
4.8	(a) See data sources, Table 4.1. (b) From 1976 to 1990, New York State Revenues were estimated by staff members of Section 842, PL 83-80.
4.9	See data sources, Table 4.1.
4.10	(a) See data sources, Table 2.1, 4.1. (b) From 1976 to 1990, New York State Revenues were estimated vy staff members of Section 842, PL 83-80.
4.11	(a) See data sources, Table 2.2, 4.1. (b) From 1976 to 1990, New York State Revenues were estimated by staff members of Section 842, PL 83-80.
4.12	(a) See data sources, Table 2.1, 2.2, and 4.1. (b) From 1976 to 1990, New York State Revenues were estimated by staff members of Section 842, PL 83-80.
4.13	See data sources, Table 4.1.

CHAPTER 5

ACTUAL AND PROJECTED EXPENDITURES NEW YORK STATE

Chapter 5 is concerned with actual expenditures and selected components over the past quarter century (1950-1975). Expenditures in New York State are expressed in current, constant, and per capita dollars. Expenditures are projected over the next decade and a half (1975-1990). The particular categories of expenditures selected to be discussed are defined in detail. The statistical methods utilized to project expenditures are discussed in detail. To illuminate and illustrate the discussion on expenditures various tables, statistical formulas, graphs, and charts are provided.

THE EXPENDITURE SETTING IN NEW YORK STATE

Total general expenditures in New York State are principally transacted out of the General Fund. The transactions of this fund constitute the traditional "New York State Budget." The General Fund[1] is divided into three main categories: (1) State Purposes Fund; (2) Local Assistance Fund; and (3) the Capital Construction Fund. Each fund is defined in greater detail in subsequent sections of this study.

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[1] See 1975 Annual Financial Report of the Comptroller Part 1. Narative, Arthur Levitt, Comptroller, State of New York.

Total General Expenditures
New York State

In 1950, total General Fund expenditures in New York State amounted to $879.7 million. See Table 5.1. Expenditures increased to $2,065.8 million in 1960 -- more than a two-fold increase. By 1970, general expenditures totalled $6,206.6, increasing more than three-fold over 1960. The increase continued into 1975 at which time the figure was $9,557.4 million. Over the past quarter century, general expenditures in New York State increased at a 10.01 percent compound annual growth rate. The rate over the last five years has slowed slightly to 9.02 percent.

Total General Expenditures in Constant Dollars - New York State. Table 5.2 contains data on expenditures in New York State in 1950 constant dollars. Expenditures in constant dollars reflect the real growth in goods and services and depict the extent to which inflation has eroded the purchasing power of the expenditure dollar. Expenditures were deflated from current to constant dollars by use of the Purchasing Power of the Consumer Dollar Index. This is nothing more than the reciprocal of the Consumer Price Index.

General expenditures in New York State in constant dollars (1950 = 100) totalled $879.7 million in 1950. By 1960, expenditures from the General Fund totalled $1,511.4 million, almost a two-fold increase. By 1970, expenditures increased to $3,848.1 million, a 2.5 fold increase over 1960. Over the past five years, expenditures (constant dollars) increased to

TABLE 5.1

TOTAL GENERAL EXPENDITURES (CURRENT DOLLARS) AND ITS VARIOUS COMPONENTS, NEW YORK STATE, 1950 - 1975

YEAR	TOTAL GENERAL EXPENDITURES	CAPITAL CONSTRUCTION	STATE PURPOSES	LOCAL ASSISTANCE FUND			
				TOTAL	EDUCATION	SOCIAL SERVICES	OTHER
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1950	879.7		373.5	506.2	228.2	228.2	133.5
1951	907.0		375.8	531.2	242.8	143.1	144.6
1952	1,010.4		458.9	551.6	277.7	124.7	153.9
1953	1,072.4		493.4	579.0	284.9	121.7	170.0
1954	1,094.5		493.9	600.6	303.0	119.9	176.4
1955	1,178.7		530.0	648.7	328.2	118.0	201.1
1956	1,329.8		587.0	742.8	373.7	127.6	239.9
1957	1,414.3		625.5	788.8	422.2	134.2	230.8
1958	1,480.0		612.7	867.2	513.0	136.0	216.6
1959	1,586.2		636.0	950.2	569.1	153.1	224.1
1960	1,861.3		757.5	1,103.7	637.9	167.5	297.5
1961	2,065.8	268.1	663.6	1,134.0	725.1	171.1	237.9
1962	2,303.0	291.7	746.6	1,264.7	818.0	183.4	263.4
1963	2,575.0	336.2	826.1	1,382.7	915.8	194.8	272.1
1964	2,780.8	327.9	889.3	1,545.5	1,032.9	216.9	296.5
1965	2,873.0	247.9	947.5	1,677.6	1,113.7	263.4	300.4
1966	3,460.0	293.4	1,010.2	2,125.9	1,305.0	373.5	447.5
1967	4,021.5	419.7	1,175.3	2,385.7	1,486.0	401.9	497.8
1968	4,584.9	461.1	1,437.9	2,685.9	1,636.7	564.3	485.1
1969	5,444.5	538.4	1,676.7	3,229.4	1,822.6	858.6	548.2
1970	6,206.6	526.2	1,992.4	3,688.0	2,187.7	877.7	622.6
1971	6,747.5	616.6	2,305.8	3,825.0	2,246.7	870.5	706.8
1972	7,422.3	563.7	2,567.9	4,290.6	2,272.1	1,129.5	888.9
1973	7,850.9	338.0	2,722.7	4,790.2	2,616.8	1,217.8	955.4
1974	8,631.3	483.5	3,037.0	5,110.8	2,817.9	1,250.0	1,042.8
1975	9,557.4	490.8	3,428.9	5,637.7	2,941.5	1,381.7	1,314.5

Note: See end of chapter for data source.

TABLE 5.2

TOTAL GENERAL EXPENDITURES (CONSTANT DOLLARS, 1950 = 100) AND ITS VARIOUS COMPONENTS
NEW YORK STATE, 1950 - 1975

YEAR	TOTAL GENERAL EXPENDITURES	CAPITAL CONSTRUCTION	STATE PURPOSES	LOCAL ASSISTANCE FUND			
				TOTAL	EDUCATION	SOCIAL SERVICES	OTHER
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1950	879.7		373.5	506.2	228.2	143.5	133.5
1951	839.9		348.0	531.2	224.8	132.5	133.6
1952	915.4		415.8	499.7	251.6	113.0	139.4
1953	964.1		443.6	520.5	284.9	109.4	153.7
1954	979.6		442.0	537.5	271.2	107.3	157.8
1955	1,059.6		476.5	583.2	295.1	106.1	180.8
1956	1,178.2		520.1	658.1	331.1	113.1	212.5
1957	1,209.2		534.8	674.4	361.0	114.7	197.4
1958	1,231.4		509.8	721.5	426.8	113.2	190.3
1959	1,308.6		524.7	783.9	569.5	126.3	184.8
1960	1,511.4		615.1	896.3	518.0	136.0	241.6
1961	1,661.0	215.6	533.5	911.7	583.0	137.6	191.2
1962	1,830.9	231.9	593.5	1,005.4	650.3	145.8	209.3
1963	2,024.0	287.8	649.3	1,086.8	719.8	153.1	213.9
1964	2,174.6	256.4	695.4	1,208.6	807.7	169.6	231.8
1965	2,204.8	188.9	722.0	1,278.3	848.6	200.7	228.8
1966	2,563.9	217.4	748.6	1,515.3	967.0	276.8	331.7
1967	2,895.5	302.2	846.2	1,717.7	1,069.9	289.4	358.4
1968	3,172.8	319.1	995.0	1,858.6	1,132.6	390.5	335.8
1969	3,571.6	353.2	1,099.9	2,118.5	1,195.6	563.2	359.7
1970	3,848.1	326.2	1,235.3	2,286.6	1,356.4	544.2	386.0
1971	4,008.0	366.3	1,369.6	2,272.1	1,334.5	517.1	419.9
1972	4,275.2	324.7	1,479.1	2,471.4	1,308.7	650.6	511.9
1973	4,255.2	183.2	1,475.7	2,596.3	1,418.3	660.0	517.9
1974	4,212.1	235.9	1,482.1	2,494.1	1,375.1	610.0	508.9
1975	4,272.2	219.4	1,532.7	2,520.1	1,314.9	617.6	587.5

Note: See end of chapter for data source.

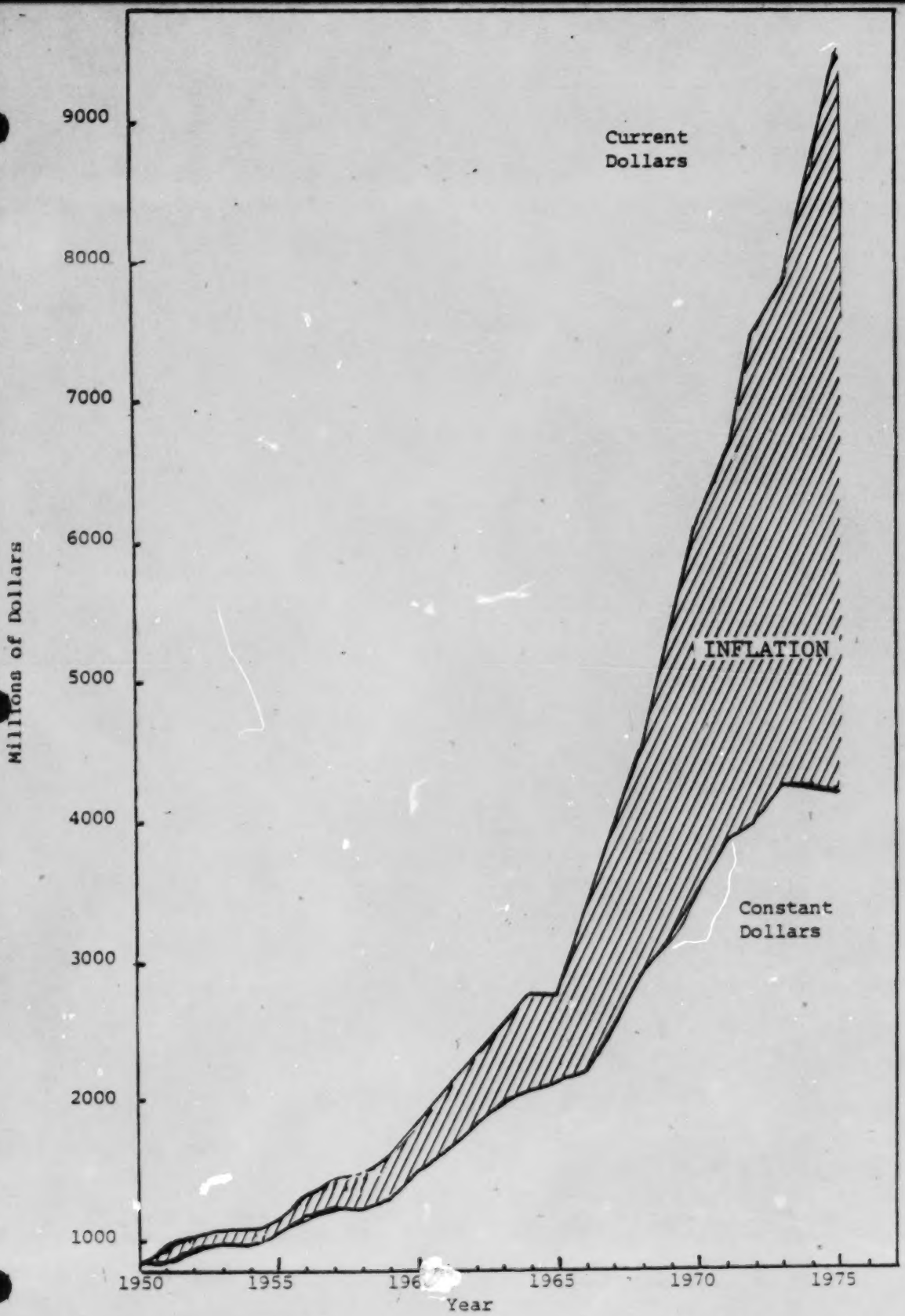

Figure 5.1 . New York State Total Expenditure in Constant and Current Dollars.

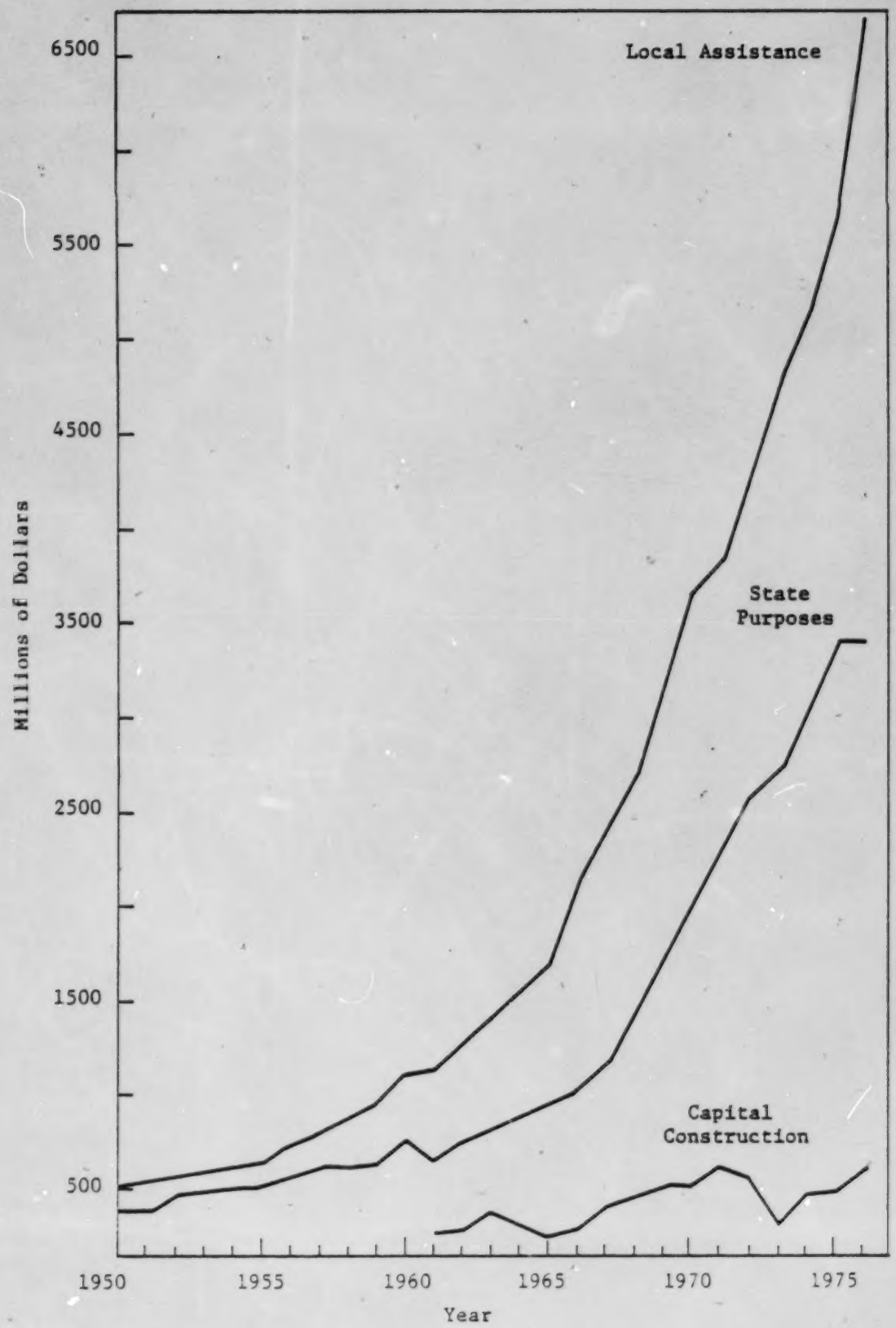

Figure 5.2. Trend Data for New York State Local Assistance, State Purposes, and Capital Construction Expenditures in Current Dollars.

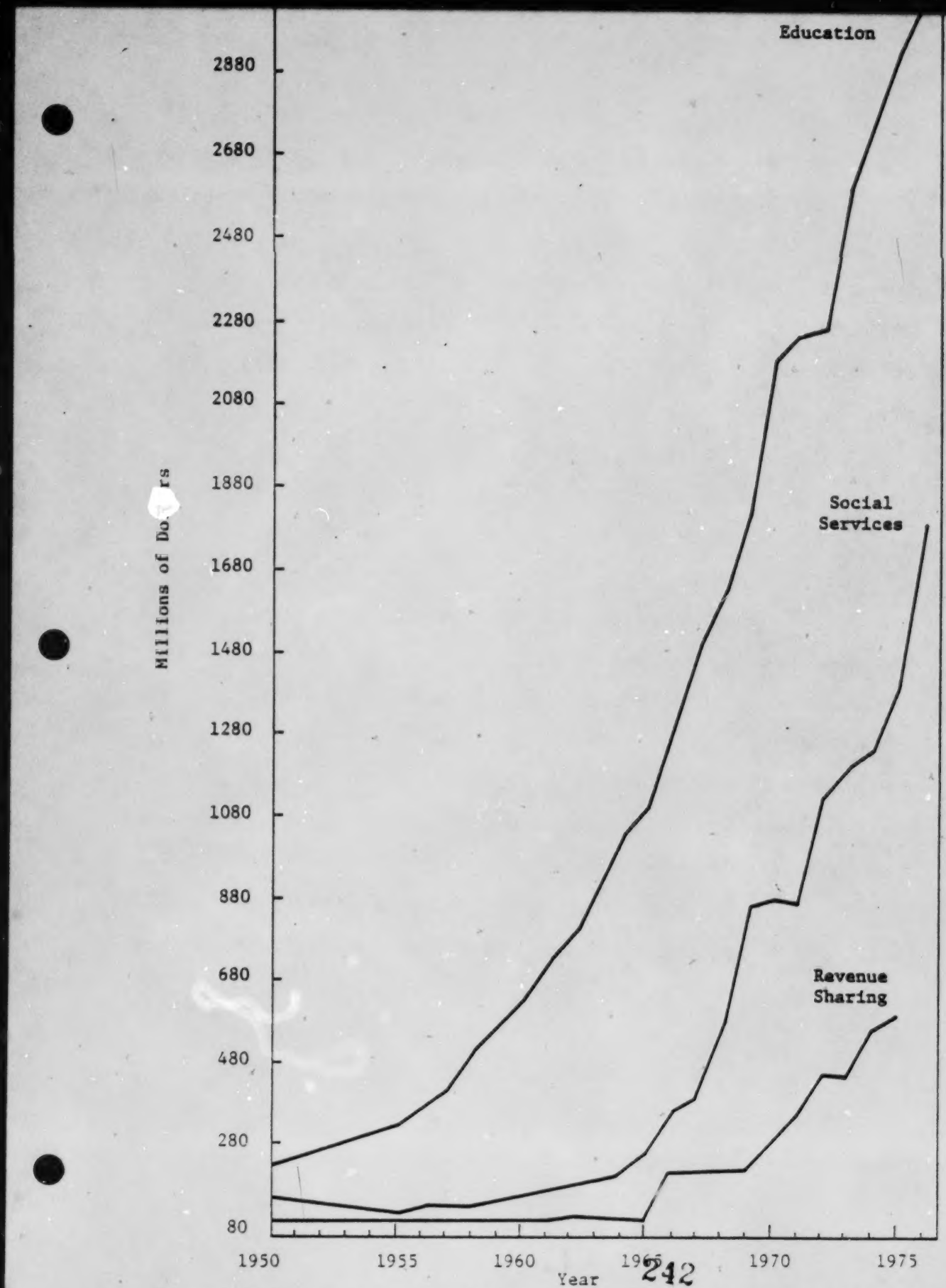

Figure 5.3. Trend Data for New York State Education, Social Services,

$4,272.2 million. Over the past twenty-five years (1950-1975) expenditures grew at a real growth rate of 6.53 percent annually. However, expenditure growth over the past five years has slowed considerably to 2.11 percent reflecting the lack of accelerated growth in the New York State economy. Although the rate of increase in real growth has slowed, it is important nevertheless to emphasis that real growth in expenditures has taken place over the past five years (1970-1975).

Per Capita General Expenditures - New York State. Another way to analyze the impact of general expenditures in New York State is to depict them in per capita statistics. Table 5.3 presents per capita general expenditures in current dollars. In 1950, per capita total general expenditures amounted to $58.98. In 1960, the figure rose to $110.50. By 1970, per capita total general expenditures continued to increase to $340.24, reaching $523.79 by 1975. Thus, per capita general expenditures in New York State increased over the 1950-1975 period at a 9.13 percent compound annual growth rate. The rate has still continued over the past five years at its historic long term trend level.

Deflating per capita general expenditures by the Purchasing Power of the Consumer Dollar (1950 = 100) reveals that per capita general expenditures went from $58.98 in 1950 to $234.13 in 1975, a 5.67 percent real growth rate. The real growth rate has decreased to 2.11 percent annually over the past five years. Table 5.4 contains data on per capita general expenditures in New York State on a constant dollar basis.

TABLE 5.3

PER CAPITA TOTAL GENERAL EXPENDITURES (CURRENT DOLLARS) AND ITS VARIOUS COMPONENTS, NEW YORK STATE, 1950 - 1975

(In Millions)

YEAR	TOTAL GENERAL EXPENDITURES	CAPITAL CONSTRUCTION	STATE PURPOSES	LOCAL ASSISTANCE FUND			
				TOTAL	EDUCATION	SOCIAL SERVICES	OTHER
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1950	58.98		25.04	33.94	15.30	9.62	8.94
1951	60.08		24.89	35.19	16.08	9.48	9.63
1952	66.04		30.03	36.01	17.78	8.16	10.07
1953	69.30		31.88	37.42	18.41	7.86	11.15
1954	69.85		31.52	38.33	19.33	7.65	11.35
1955	74.22		33.37	40.85	20.66	7.43	12.76
1956	82.62		36.47	46.15	23.21	7.92	15.02
1957	86.73		38.36	48.37	25.89	8.23	14.25
1958	89.71		37.14	52.57	31.10	8.24	13.23
1959	94.87		38.13	56.74	34.12	9.18	12.73
1960	110.50		44.97	65.53	37.87	9.94	17.72
1961	121.77	15.80	39.12	66.85	42.75	10.08	14.02
1962	134.00	16.97	43.44	73.58	47.59	10.67	15.32
1963	147.66	21.00	47.37	79.29	52.52	11.17	15.60
1964	156.64	18.59	50.42	87.63	58.57	12.29	16.77
1965	161.44	13.93	53.24	94.27	62.58	14.80	16.89
1966	191.29	16.36	56.35	118.58	72.79	20.83	24.96
1967	220.97	23.29	65.24	132.44	82.49	22.31	27.64
1968	253.17	25.46	79.40	148.31	90.38	31.16	26.77
1969	299.73	29.64	92.30	177.79	100.34	47.26	30.19
1970	340.24	28.84	109.22	202.18	119.93	48.11	34.14
1971	369.88	33.80	126.40	209.68	123.16	47.71	38.81
1972	406.84	30.89	140.76	235.19	124.54	61.91	48.74
1973	430.31	18.52	149.23	262.56	143.43	66.75	52.38
1974	473.03	26.49	166.44	280.10	154.43	68.50	57.17
1975	523.79	26.90	187.92	308.97	161.20	75.72	72.05

Note: See end of chapter for data source

TABLE 5.4

PER CAPITA TOTAL GENERAL EXPENDITURES (CONSTANT DOLLARS, 1950 = 100) AND ITS VARIOUS COMPONENTS
NEW YORK STATE, 1950 - 1975

YEAR	TOTAL GENERAL EXPENDITURES	CAPITAL CONSTRUCTION	STATE PURPOSES	LOCAL ASSISTANCE FUND			
				TOTAL	EDUCATION	SOCIAL SERVICES	OTHER
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1950	58.98		25.04	33.94	15.30	9.62	9.02
1951	55.64		23.05	32.59	14.89	8.77	8.93
1952	60.19		27.21	32.98	16.47	7.40	9.11
1953	62.29		28.66	33.63	16.55	7.07	10.01
1954	62.51		28.21	34.31	17.31	6.85	10.15
1955	66.72		30.00	36.72	18.58	6.68	11.46
1956	73.20		32.31	40.89	20.57	7.03	13.29
1957	74.15		32.79	41.36	22.14	7.03	12.19
1958	74.65		30.91	43.74	25.87	6.86	11.01
1959	78.46		31.46	47.00	28.15	7.57	11.28
1960	89.73		36.52	53.21	30.75	8.07	14.39
1961	97.91	12.71	31.45	53.75	34.37	8.11	11.27
1962	106.52	13.49	34.53	58.50	37.83	8.48	12.19
1963	116.05	16.50	37.23	62.32	41.28	8.78	12.26
1964	122.49	14.53	39.43	68.53	45.80	9.61	14.94
1965	123.01	10.61	40.57	71.83	47.68	11.27	12.88
1966	141.74	12.12	41.75	87.87	53.94	15.44	18.49
1967	159.09	16.77	46.97	95.35	59.39	16.06	19.90
1968	175.19	17.62	54.94	102.63	62.54	21.56	18.53
1969	196.62	19.44	60.55	116.63	65.82	31.00	19.81
1970	210.95	17.88	67.72	125.35	74.35	29.83	21.17
1971	219.70	20.08	75.07	124.55	73.15	28.34	21.86
1972	234.33	17.79	81.07	135.47	71.73	35.66	28.08
1973	233.22	10.04	80.88	142.30	77.74	36.17	28.39
1974	230.83	12.92	81.22	136.69	75.36	33.43	27.90
1975	234.13	12.02	84.00	138.11	72.06	33.85	32.20

Note: See end of chapter for data source.

PROJECTED GENERAL EXPENDITURES - NEW YORK STATE

This section deals with the projection of New York State general expenditures by selected categories over the 1976-1990 period. General expenditures were projected, like New York State revenues, utilizing several different statistical procedures. The object, of course, was to secure the regression equations having the highest forecasting efficiency coefficient. These equations were used to project the selected components. Table 5.5 contains data on expenditure forecasting efficiency coefficients.

Total general expenditure for New York State was projected from the measure itself and then disaggregated to produce values for its selected components. As a statistical check for reasonableness, general expenditure was also projected from its selected components through the process of projecting the separate components and then aggregating them to obtain total general expenditures. These procedures produced projected general expenditure base line data which were modified in light of a number of underlying assumptions concerning general expenditures.

Projected Capital Construction Expenditures - New York State

Although funds for capital construction[1] may be derived from a variety of sources, the concern here is only with

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[1] For a more descriptive definition of the Capital Construction Fund, see the Annual Report of the Comptroller, State of New York.

TABLE 5.5

COEFFICIENTS OF FORECASTING EFFICIENTY FOR VARIOUS NEW YORK STATE EXPENDITURE MEASURES

REVENUE MEASURE	REGRESSION EQUATION COEFFICIENTS					
	STRAIGHT LINE		POLYNOMIAL		NATURAL LOGARITHM	
	Constant	Current	Constant	Current	Constant	Current
(1)	(2)	(3)	(4)	(5)	(6)	(7)
I. Total General Fund	.7465	.639	.8326	.862*	.8646*	.626
A. Capital Construction	.0126*	.284	.0126	.284	.0084	.296*
B. State Purposes	.6485	.556	.8156*	.911*	.7815	.776
C. Local Assistance	.7336	.634	.8332	.923*	.8501*	.882
1. Education	.7971	.715	.8085	.852	.8259*	.923*
2. Social Services	.5278	.510	.7095*	.770*	.5955	.645
3. Health & Environment	.4543	.405	.6030*	.681*	.3238	.627
4. Mental Health	.0467	.237	.0467	.237	.0593*	.262*
5. Transportation	.4869	.599	.4869	.127	.5218*	.739*
6. Housing	.2362	.472	.2362	.336	.2485*	.564*
7. State-Local Revenue Sharing	.4421	.436	.7346*	.803*	.4707	.436
8. Miscellaneous	.0623	.202	.0623	.495*	.1224*	.258

*The asterisk indicates the projective formulas actually used to predict each expenditure component.

capital construction financed out of the General Fund and so enumerated in the State of New York's Annual Financial Report of the Comptroller.

Beginning in 1960-61, the Capital Construction Fund became the third part of the General Fund along with the State Purposes Fund and the Local Assistance Fund. Generally speaking, expenditures for capital construction reflect outlays for constructing and restructuring the state's highways, parkways, grade crossings, constructing certain institutions, hospitals, schools, prisons, rehabilitating and improving existing facilities, canal improvements, flood control, rental occupancy payments for state workers, and various other improvements.

In 1961, expenditures for capital construction totalled $268.1 million. The figure increased to $526.2 million, by 1970, reaching a high of $616.6 million in 1971. Table 5.1 enumerates the data on capital construction expenditures. As can be gleaned from Table 5.6, yearly percentage increases in capital construction expenditures fluctuated from highs of 25.0, 39.0, and 28.8 percent to decreases of minus 11.5, 26.3, and 43.6 percents. Yearly percentage increases for capital construction expenditures are depicted in Table 5.6.

Expenditures for capital construction in New York State increased at a compound annual growth rate of 4.41 percent over the years 1961 to 1975. From 1970 to 1975, however, capital construction expenditures decreased at a 4.67 percent rate. The decrease undoubtedly reflects the dire need for current operating funds in New York State rather than the state

TABLE 5.6

YEARLY PERCENT GROWTH RATES FOR SELECTED NEW YORK STATE EXPENDITURES AND COMPONENTS IN CURRENT DOLLARS

YEAR	TOTAL GENERAL EXPENDITURES	CAPITAL CONSTRUCTION	STATE PURPOSES	LOCAL ASSISTANCE FUND		
				TOTAL	EDUCATION	SOCIAL SERVICES
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1951	3.1		0.6	4.9	6.4	- 0.3
1952	11.4		22.1	3.8	14.4	-12.9
1953	6.1		7.5	5.0	2.6	- 2.4
1954	2.1		0.1	3.7	6.4	- 1.5
1955	7.7		7.3	8.0	8.3	- 1.6
1956	12.8		10.8	14.5	13.9	8.1
1957	6.4		6.6	6.2	13.0	5.2
1958	4.6		- 2.0	9.9	21.5	1.3
1959	7.2		3.8	9.6	10.9	12.6
1960	17.3		19.1	16.2	12.1	9.4
1961	11.0		-12.4	2.7	13.7	2.1
1962	11.5	8.8	12.5	11.5	12.8	7.2
1963	11.8	25.5	10.6	9.3	12.0	6.2
1964	8.0	-10.5	7.7	11.8	12.8	11.3
1965	4.1	-24.4	6.5	8.5	7.8	21.4
1966	19.6	18.4	6.6	26.7	12.2	41.8
1967	16.2	43.0	16.3	12.2	13.9	7.6
1968	14.0	9.9	22.3	12.6	10.1	40.4
1969	18.7	16.8	16.6	20.2	11.4	52.2
1970	14.0	- 2.3	18.8	14.2	20.0	2.2
1971	8.7	17.2	15.7	3.7	2.7	- 0.8
1972	10.0	- 8.6	11.4	12.2	1.1	29.8
1973	5.8	-40.0	6.0	11.6	15.2	7.8
1974	9.9	43.0	11.5	6.7	7.7	2.6
1975	10.7	1.5	12.9	10.3	4.4	10.5

Note: See end of chapter for data source.

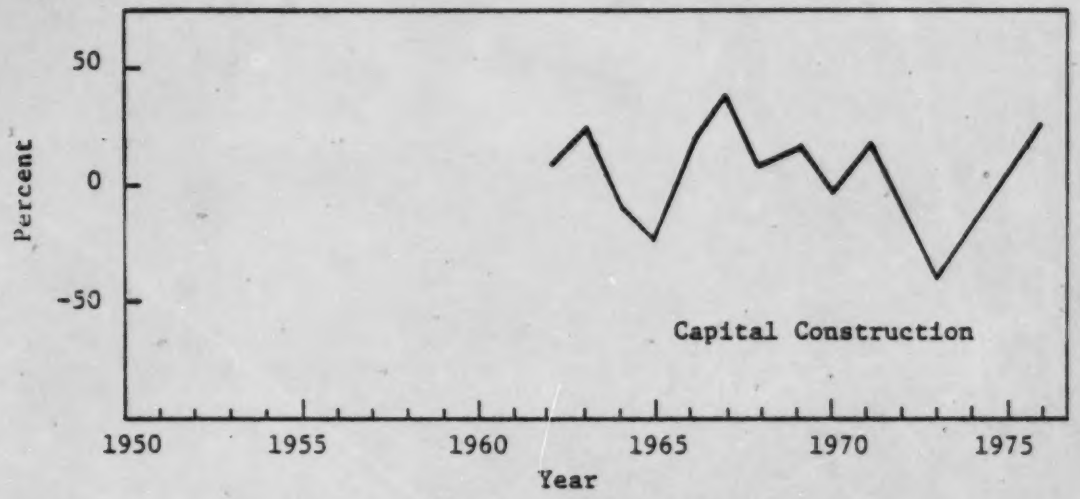

Figure 5.4. Trend Data for New York State Capital Construction Expenditure Yearly Growth Rates in Current Dollars.

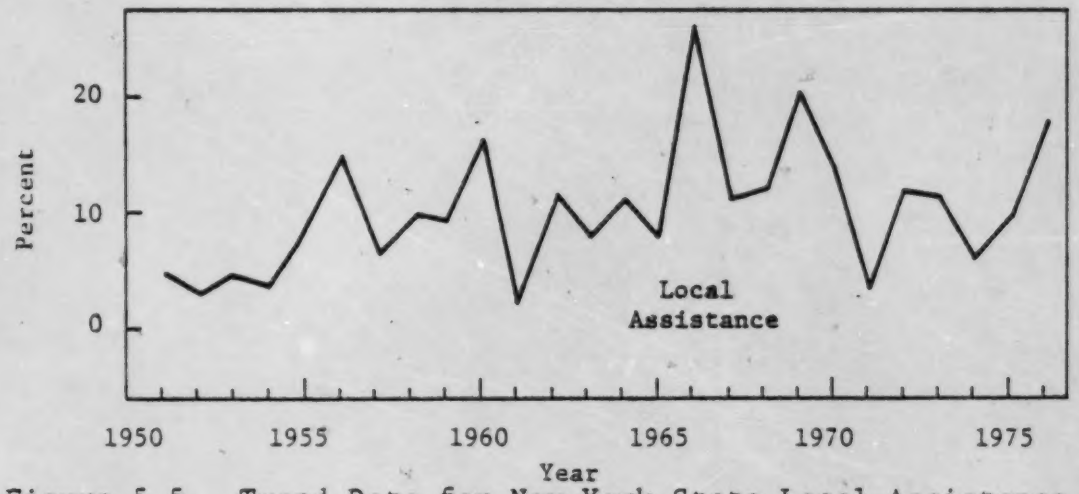

Figure 5.5. Trend Data for New York State Local Assistance Expenditure Yearly Growth Rates in Current Dollars.

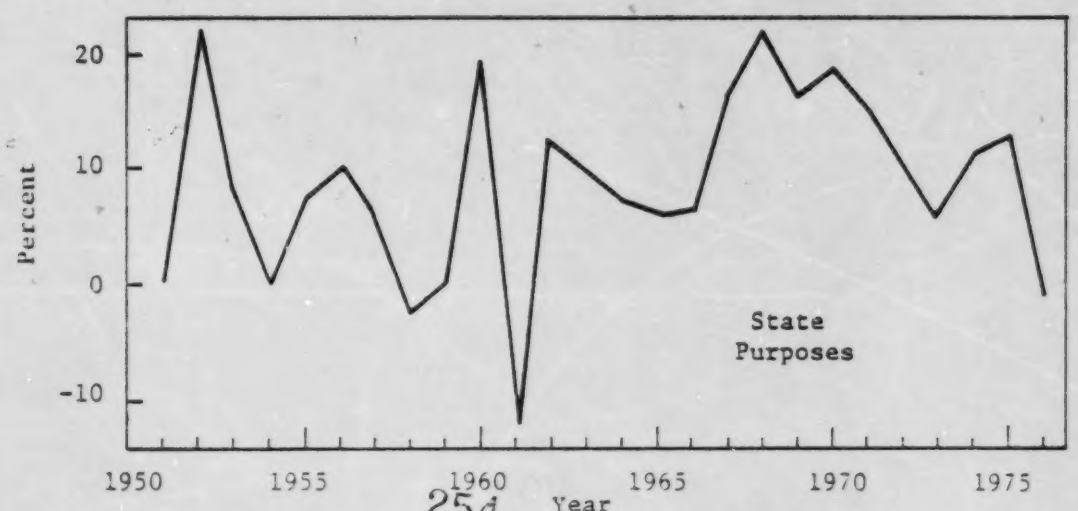

Figure 5.6. Trend Data for New York State Purposes Expenditure

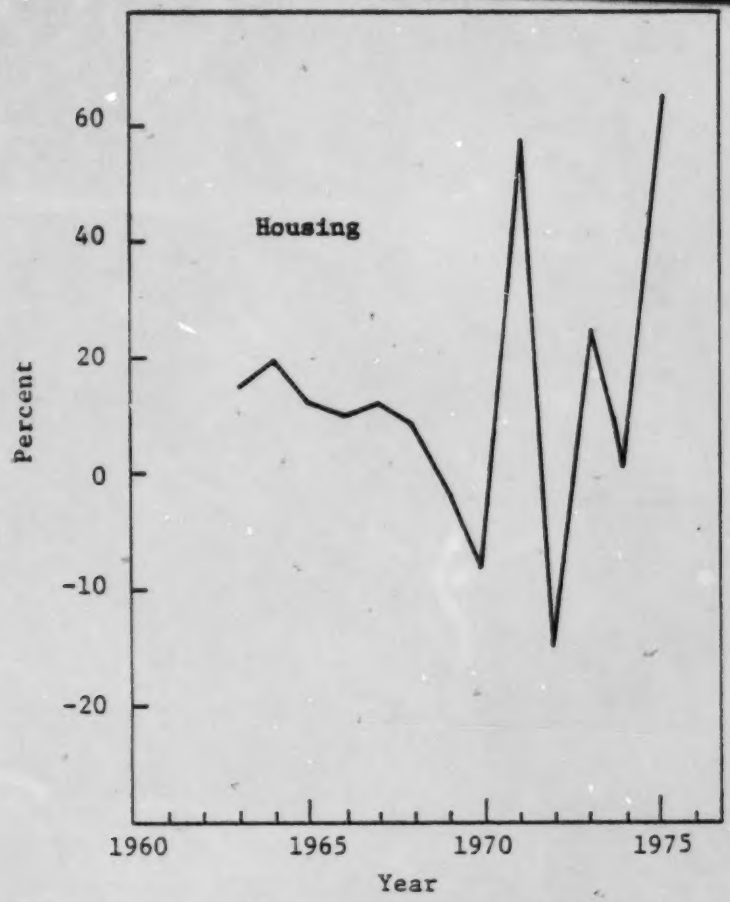

Figure 5.7. Trend Data for New York State Housing Expenditure Yearly Growth Rates In Current Dollars.

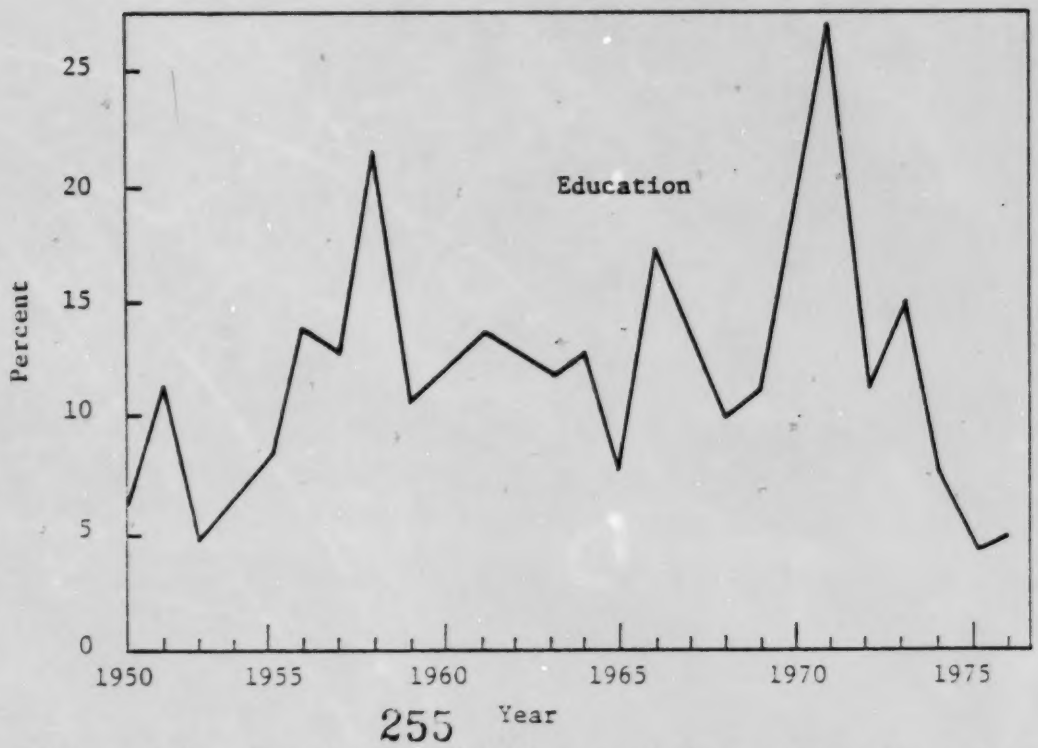

Figure 5.8. Trend Data for New York State Education Expendi-

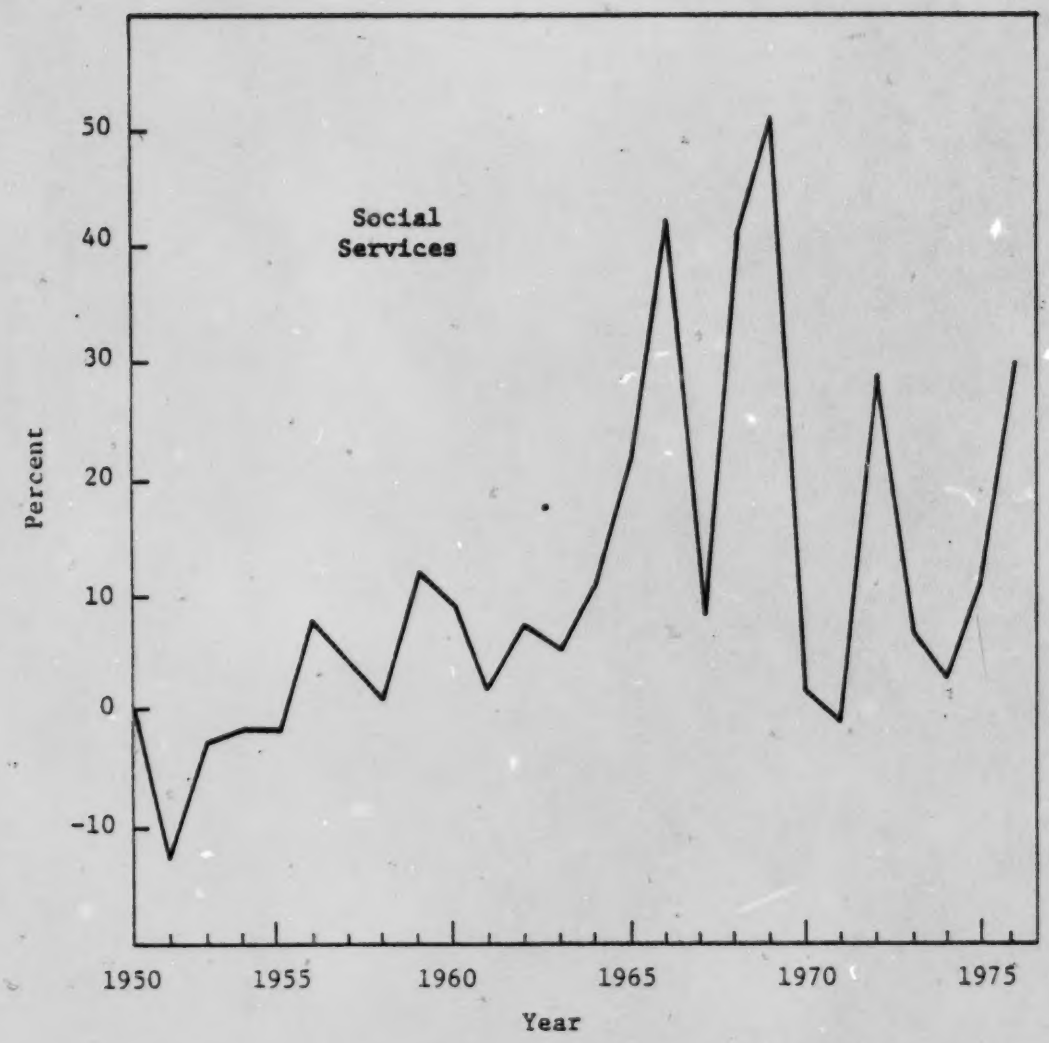

Figure 5.9. Trend Data for New York State Social Services Expenditure Yearly Growth Rates in Current Dollars.

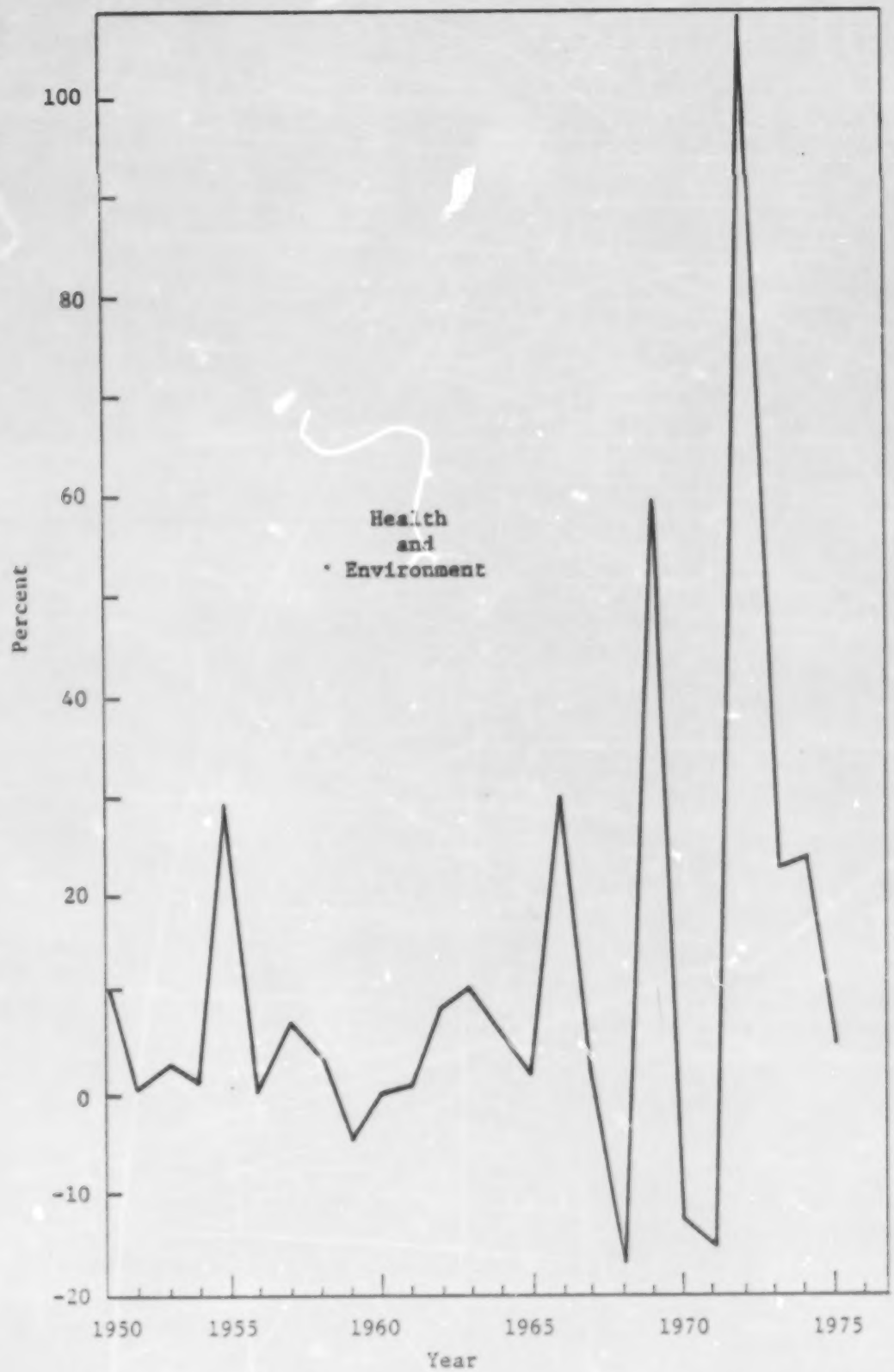

Figure 5.10. Trend Data for New York State Health and Environment Expenditure Yearly Growth Rates in Current Dollars.

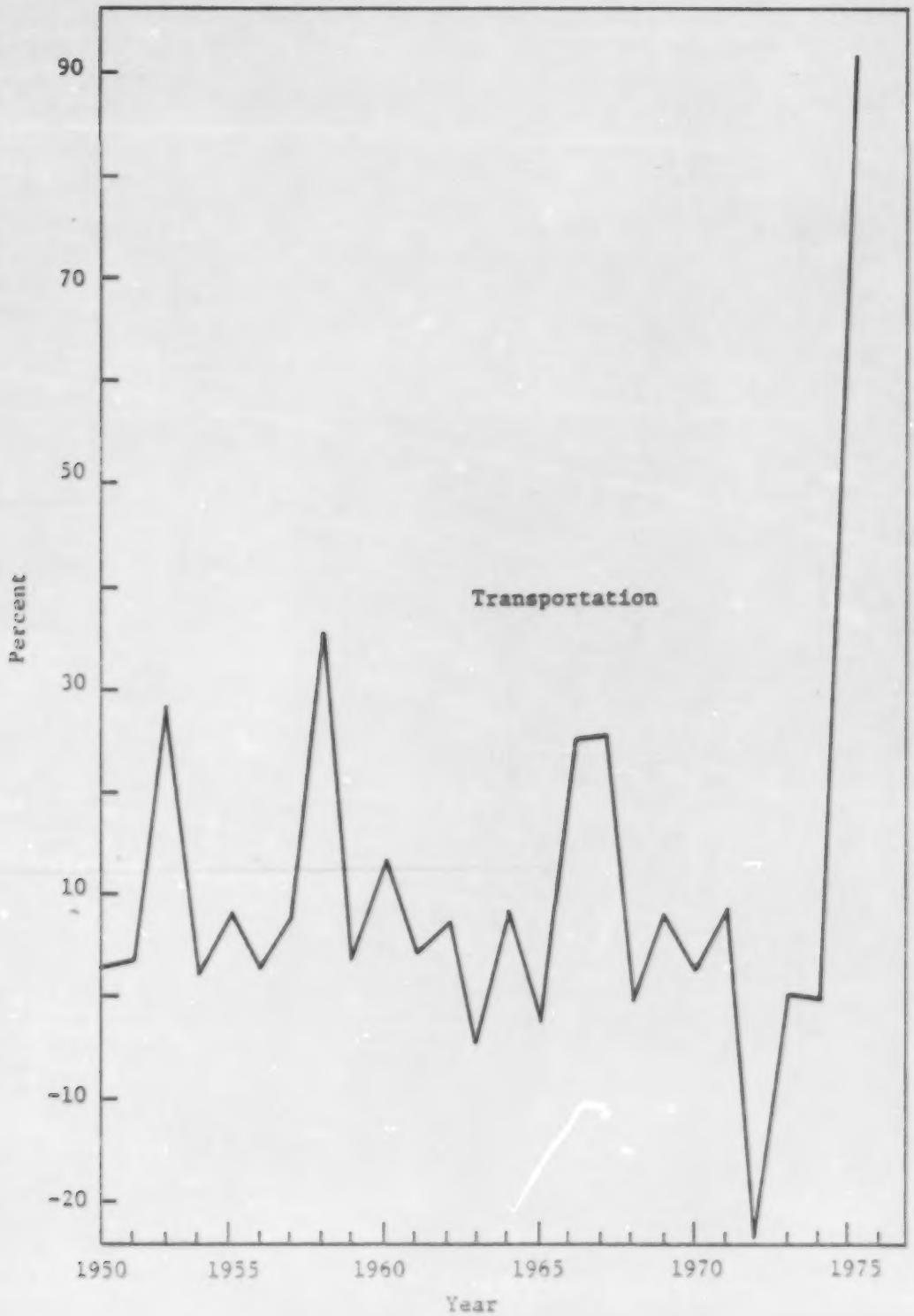

Figure 5.11. Trend Data for New York State Transportation Expenditure Yearly Growth Rates in Current Dollars.

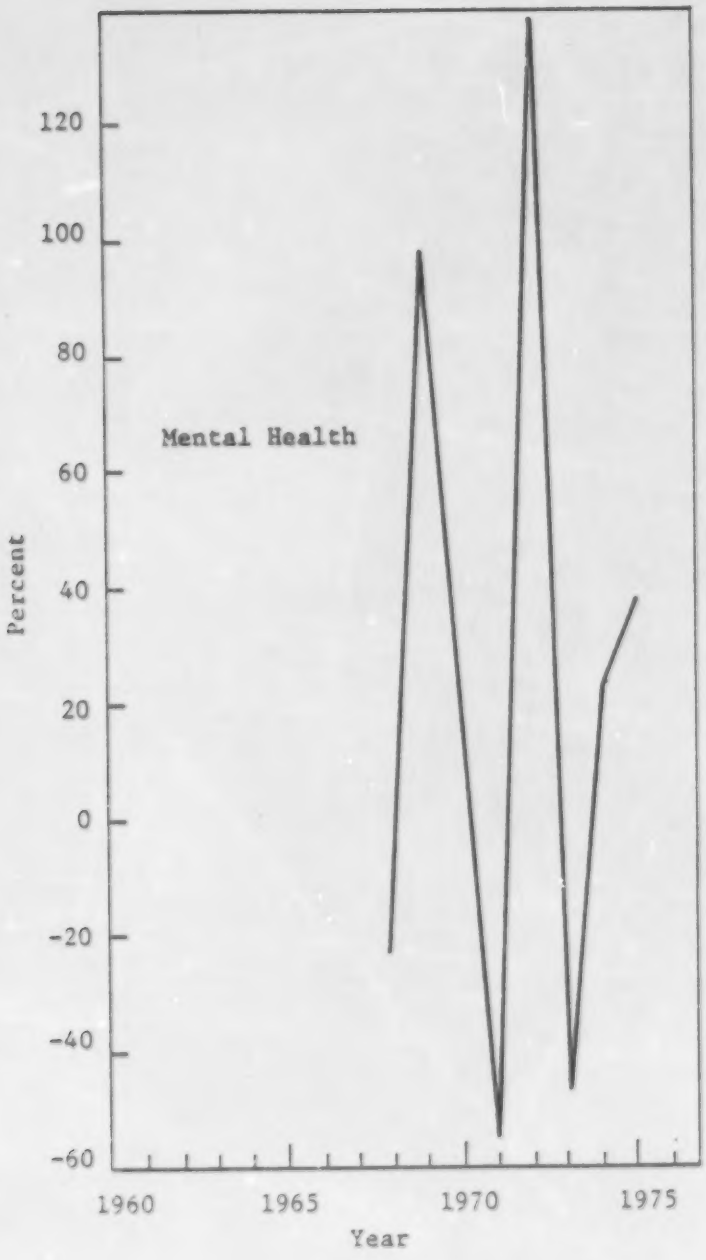

Figure 5.12. Trend Data for New York State Mental Health Expenditure Yearly Growth Rates in Current Dollars.

having reduced capital construction needs. There is no evidence suggesting that construction needs have slackened. The reductions appear to follow the precept that in a declining economy, increasing inflation and higher bond interest rates, non-imperative capital construction projects should be delayed. Only time will tell whether or not this is a most prudent course of action. There presently are many project needs in the areas of mass transportation, rail perservation, and environmental protection.

On a per capita basis, capital construction expenditures totalled $15.80 in 1961; $28.84 in 1970; $33.80 in 1971 (its high), and $26.90 in 1975. The impact of capital construction expenditures on the taxpayers of New York State has followed an erratic pattern as can be deduced from the data in Table 5.3.

When expenditures for capital construction are deflated by the Purchasing Power of the Consumer Dollar,[1] expenditures totalled $215.6 million (1950 constant dollars) in 1961, increasing to $366.3 million in 1971, and to $219.4 million in 1975. The data on a per capita constant dollar basis is just as erratic as is total capital construction expenditures. In 1961, per capita expenditures for capital construction in Constant Dollars totalled $12.71, increasing to its high of $20.08 in 1972, and decreased subsequently each year to $12.02

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[1] A more appropriate index would be a capital construction index, such as American Appraisal Company Index, Associated General Contractors Index, Furno's Cost of Building Index, or Engineering News Record Construction Index.

in 1975.

Projected Expenditures for Capital Construction - New York State. Several procedures were utilized to obtain regression equations for expenditures for capital construction. Because of the cyclical nature of outlays for capital construction, forecasting efficiency coefficients were relatively low. The regression equation having the highest forecasting efficiency was the natural logarithm. See Table 5.5. Expenditures for capital construction are projected to rise from $490.8 million in 1975, to $644.6 million in 1980 -- an increase of 153.8 million, to $727.7 million in 1985, and to $801.6 million in 1990. These data reflect the following growth rates: (1) from 1975-1980 -- 5.60 percent; (2) from 1980-1985 -- 2.45 percent; and (3) from 1985-1990 -- 1.95 percent. Energy shortages, particularly gasoline and natural gas, will lead to projected increases for capital outlay expenditures greater than anticipated. As noted earlier, this will be particularly true in the areas of mass transit, environmental conservation, and rail preservation and improvements. See Table 5.7.

In 1961, expenditures for capital construction accounted for 13.1 percent of total general expenditures in New York State, rising to 14.2 percent in 1963, its highest level. From this point on, capital construction expenditures represented less and less of the total expenditures. In 1975, the percent was 5.1. This trend is projected to continue into the future. For example, capital outlays are projected to account for 4.80 percent of total expenditures in 1980, declining to 3.98 percent

TABLE 5.7

NEW YORK STATE PROJECTED EXPENDITURES IN CURRENT DOLLARS
(In Millions)

YEAR	TOTAL GENERAL EXPENDITURES	STATE PURPOSES	CAPITAL CONSTRUCTION	LOCAL ASSISTANCE FUND			
				TOTAL	EDUCATION	SOCIAL SERVICES	OTHER
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1975 (ACTUAL)	9,557.4	490.8	3,428.9	5,637.7	2,941.5	1,381.7	1,314.5
			PROJECTED				
1976	10,278.5	584.3	3,686.1	6,008.1	3,088.6	1,483.8	1,432.8
1977	10,963.9	598.6	3,962.5	6,402.8	3,243.0	1,593.5	1,561.8
1978	11,696.8	613.6	4,259.7	6,823.5	3,405.2	1,711.2	1,702.3
1979	12,479.9	628.9	4,579.2	7,271.8	3,575.4	1,837.7	1,855.5
1980	13,316.8	644.6	4,922.6	7,749.6	3,754.2	1,973.5	2,022.5
1981	14,161.4	635.5	5,267.2	8,258.7	3,941.9	2,119.3	2,194.4
1982	15,100.7	663.5	5,635.9	8,801.3	4,138.9	2,275.9	2,380.9
1983	16,102.6	692.7	6,030.4	9,379.5	4,385.9	2,444.1	2,583.3
1984	17,158.4	710.0	6,452.6	9,995.8	4,563.2	2,624.8	2,802.9
1985	18,284.4	727.7	6,904.2	10,652.5	4,791.4	2,818.7	3,041.1
1986	20,048.8	745.9	7,904.7	11,398.2	5,083.7	3,059.7	3,201.6
1987	21,532.5	764.6	8,457.9	12,310.0	5,393.8	3,319.8	3,370.6
1988	23,225.4	776.7	9,092.3	13,356.4	5,722.8	3,601.9	3,548.5
1989	24,421.4	789.0	9,728.8	13,903.6	6,071.9	3,908.1	3,735.8
1990	25,847.0	801.6	10,409.8	14,635.6	6,462.3	4,240.3	3,933.0

Note: Total General Expenditures Column (2)= Column (3) + Column (4) + Column (5). See end of chapter for data source.

in 1985, and still further to 3.10 percent in 1990. This is because many major state office building projects have been completed or are near completion. See Table 5.9.

On a per capita basis, capital construction expenditures are projected to rise modestly, but nevertheless relentlessly, from $26.90 in 1975 to $35.13 in 1980, to $35.13 in 1985, and to $42.24 in 1990. This rate of increase reflects a 3.1 percent growth rate from 1975 to 1990. See Table 5.10.

Projected Expenditures for Capital Construction in Constant Dollars - New York State. Current dollars were deflated by means of the Purchasing Power of the Consumer Dollar to measure the real growth in expenditures for capital construction. Building costs have been escalating over the past fifteen years at slightly more than a six percent rate.[1] We have projected the rate of inflation for capital construction to ameliorate somewhat between four and five percent over the next decade and a half. Because of inflation, the real growth in capital construction expenditures will be erratic and will reflect a consistent, cyclical growth pattern. Expenditures are projected to increase from $219.4 million (1950 constant dollars), to $228.8 million in 1980, decreasing to $216.9 million in 1985, and declining further to $202.8 million in 1990. On a per capita basis, capital construction expenditures in 1950 constant

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[1] For example, the American Appraisal Company Index increased at a 6.24 percent compound annual growth rate; the Associated General Contractors Index, 6.10 percent; and the Engineering News Record Construction Index, 6.43 percent.

TABLE 5.8

PERCENT SELECTED EXPENDITURE MEASURES ARE OF TOTAL GENERAL EXPENDITURES, NEW YORK STATE

YEAR (1)	CAPITAL CONSTRUCTION (2)	STATE PURPOSES (3)	TOTAL (4)	EDUCATION (5)	SOCIAL SERVICES (6)	OTHER (7)
1950		57.5	45.1	45.1	28.3	26.4
1951		41.4	58.6	45.7	26.9	27.3
1952		45.4	54.6	50.3	22.6	31.9
1953		46.0	54.0	49.2	21.0	29.7
1954		45.1	54.9	50.4	20.1	29.4
1955		45.1	55.0	50.6	18.2	31.1
1956		44.1	55.9	50.3	17.2	32.4
1957		44.2	55.8	53.5	17.0	29.2
1958		41.4	58.6	59.2	15.7	25.0
1959		40.1	59.9	59.9	16.1	23.6
1960		40.7	59.3	57.8	15.2	27.1
1961	13.1	32.1	54.9	63.9	15.1	21.0
1962	12.7	32.4	54.9	64.7	14.5	20.9
1963	14.2	32.1	53.7	66.2	14.1	19.6
1964	11.8	32.1	55.6	66.8	14.0	19.2
1965	8.6	32.7	58.1	66.4	15.7	18.0
1966	8.5	29.2	61.4	61.4	17.6	21.0
1967	10.4	29.2	59.3	62.3	16.8	21.0
1968	10.1	31.4	58.6	60.9	21.0	18.0
1969	9.9	30.8	59.3	56.4	26.6	17.0
1970	8.5	32.1	59.4	59.3	23.8	16.9
1971	9.1	34.2	56.7	58.7	22.8	18.7
1972	7.6	34.6	57.8	53.1	26.3	20.7
1973	4.3	34.7	61.0	54.6	25.4	20.2
1974	5.6	35.2	59.2	55.1	24.5	20.2
1975	5.1	35.9	59.1	52.2	24.5	23.3

TABLE 5.9

NEW YORK STATE PROJECTED PER CAPITA EXPENDITURES IN CURRENT DOLLARS

YEAR	TOTAL GENERAL EXPENDITURES	STATE PURPOSES	CAPITAL CONSTRUCTION	LOCAL ASSISTANCE FUND			
				TOTAL	EDUCATION	SOCIAL SERVICES	OTHER
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1975 (ACTUAL)	523.8	187.9	26.9	309.0	161.2	75.7	72.0
			PROJECTED				
1976	562.7	201.8	32.1	328.9	169.1	81.2	78.6
1977	599.5	216.7	32.7	350.1	177.3	87.1	85.7
1978	638.9	232.7	33.5	372.7	186.0	93.5	93.2
1979	681.7	250.1	34.4	397.2	195.1	100.3	101.9
1980	725.7	268.3	35.1	422.3	204.6	107.6	110.2
1981	769.4	286.2	34.5	448.7	214.2	115.1	119.4
1982	817.1	304.9	35.9	476.2	223.9	123.1	129.1
1983	869.6	325.6	37.4	506.5	236.9	131.9	137.7
1984	923.8	347.4	38.2	538.2	245.7	141.3	151.2
1985	981.4	370.6	39.1	571.8	257.2	151.3	163.3
1986	1,072.1	422.7	39.9	609.5	271.9	163.6	174.1
1987	1,147.2	450.6	40.7	655.9	287.4	176.9	191.6
1988	1,232.8	482.6	41.2	708.9	303.8	191.2	214.0
1989	1,291.6	514.5	41.7	735.3	321.1	206.7	207.5
1990	1,362.0	548.6	42.2	771.2	340.5	223.5	207.3

Note: See end of chapter for data source.

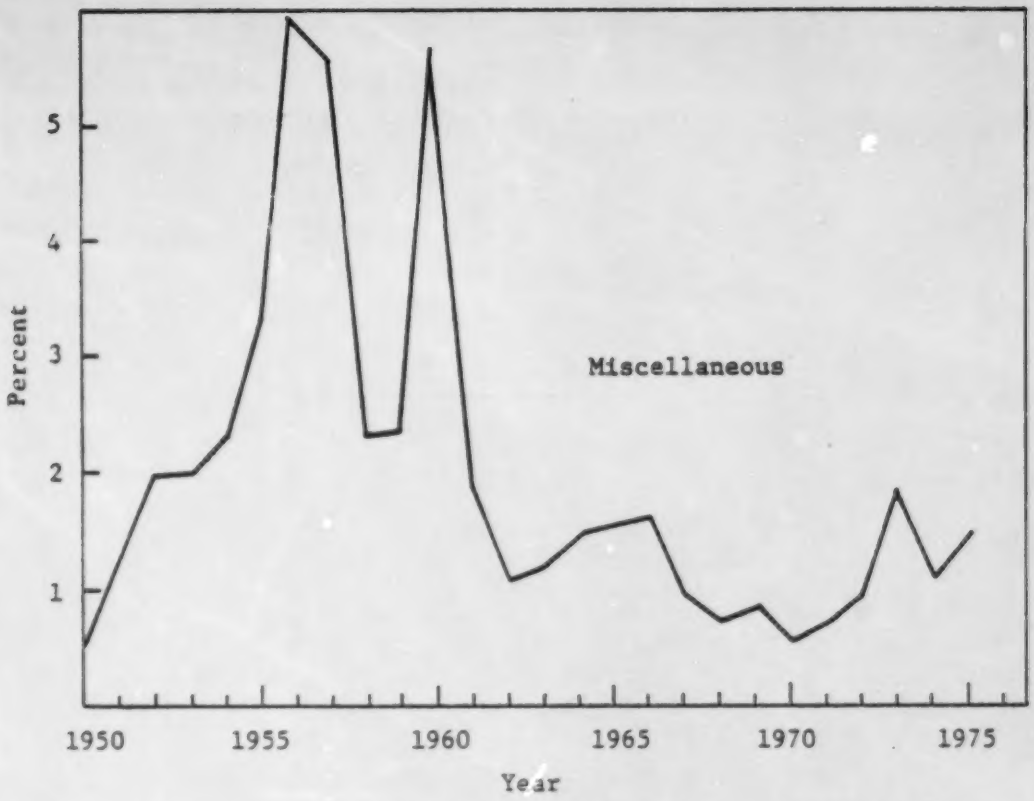

Figure 5.13. Trend Data for New York State Miscellaneous Expenditure as a Percent of Total Local Fund Expenditures in Current Dollars.

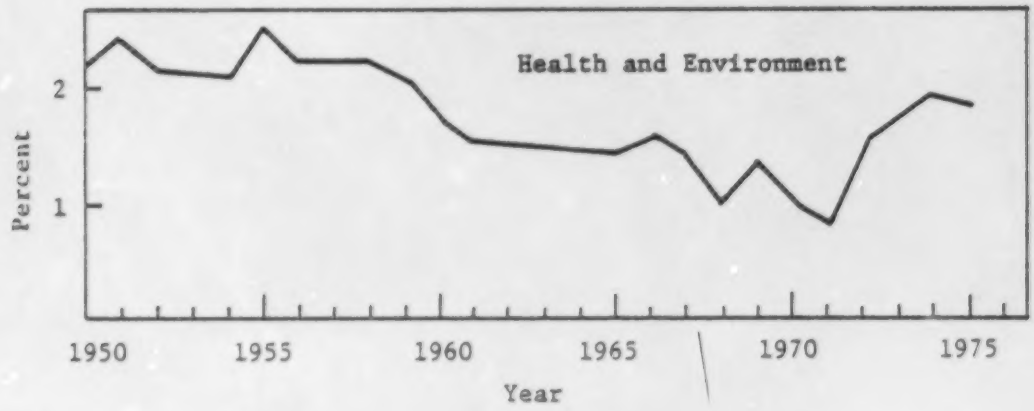

Figure 5.14. Trend Data for New York State Health and Environment Expenditure as a Percent of Total Local Fund Expenditures in Current Dollars.

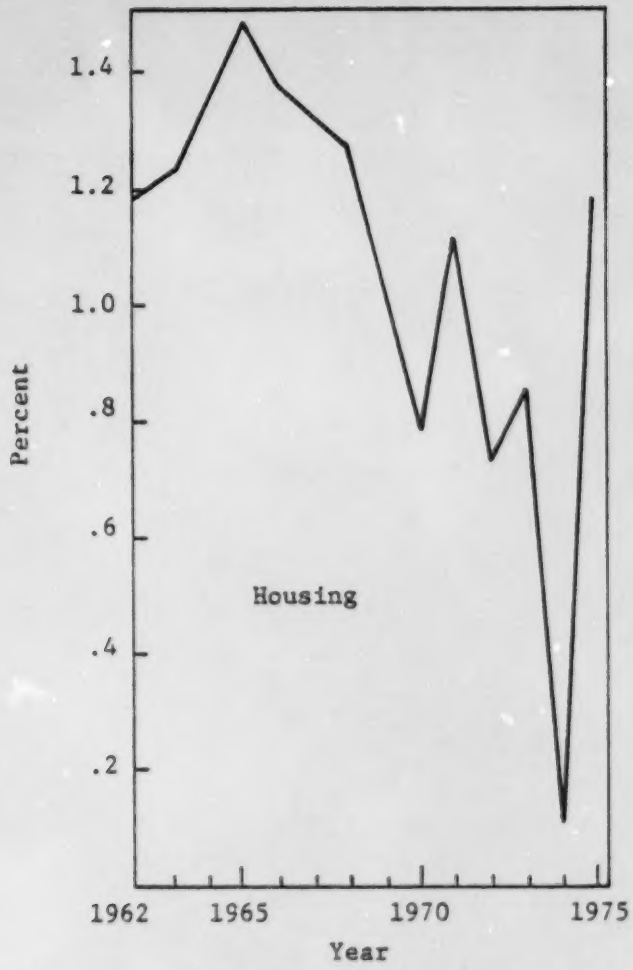

Figure 5.15. Trend Data for New York State Housing Expenditure as a Percent of Total Local Fund Expenditures in Current Dollars.

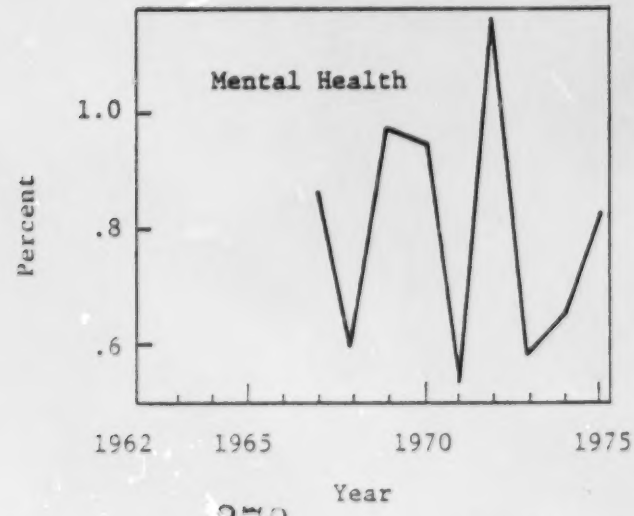

Figure 5.16. Trend Data for New York State Mental Health Expenditure as a Percent of Total Local Fund Expenditures in Current Dollars.

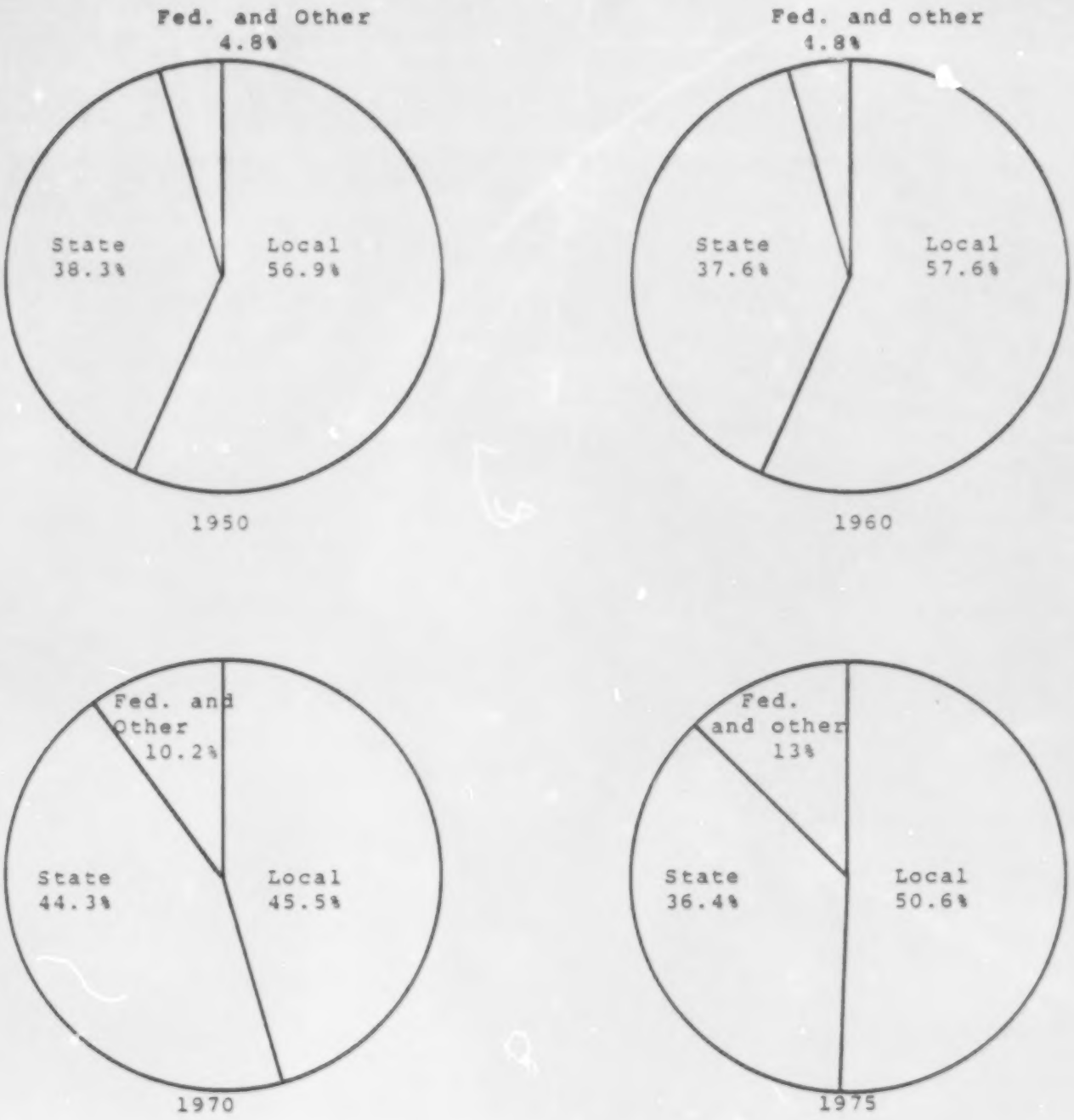

Figure 5.17. Percent that State, Local, Federal and Other Aid are of Total Aid for New York Public Schools K-12.

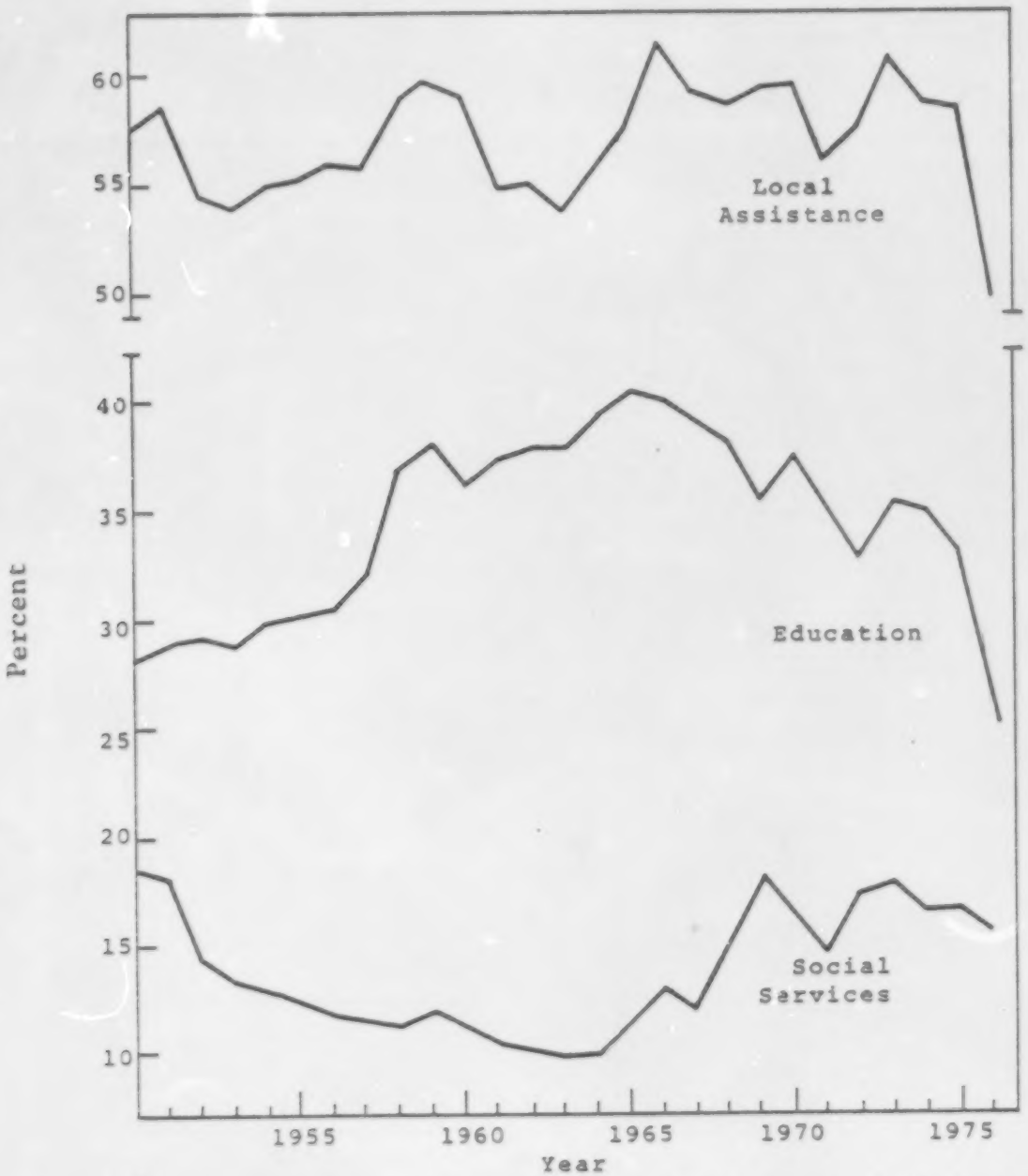

Figure 5.18. Trend Data for New York State Local Assistance as a Percent of Total Expenditures and Education and Social Services as a Percent of Total Local Assistance Expenditures in Current Dollars.

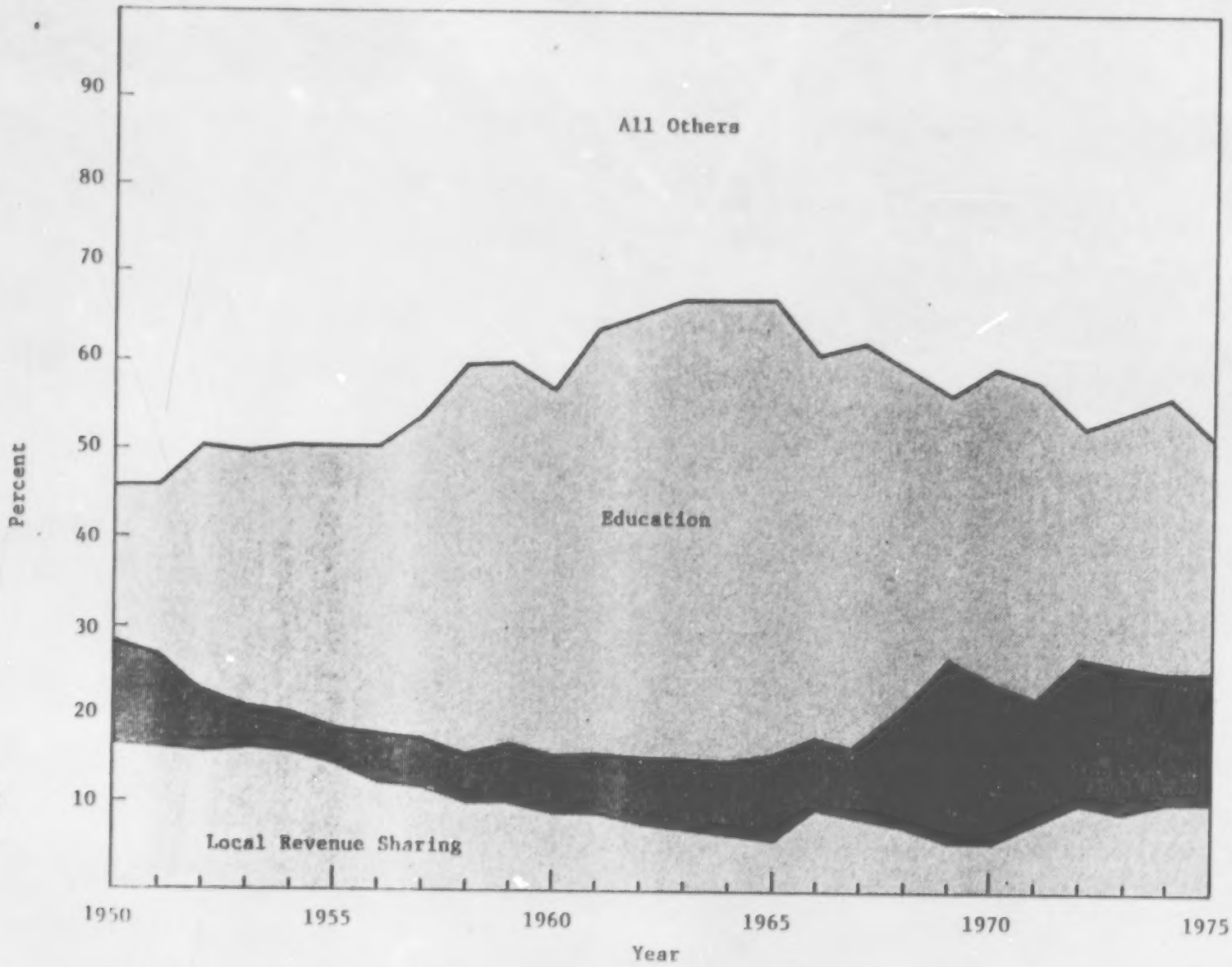

Figure 5.19. Percent Share Various Components are of Total New York State General Expenditures in Current Dollars, 1950-1975.

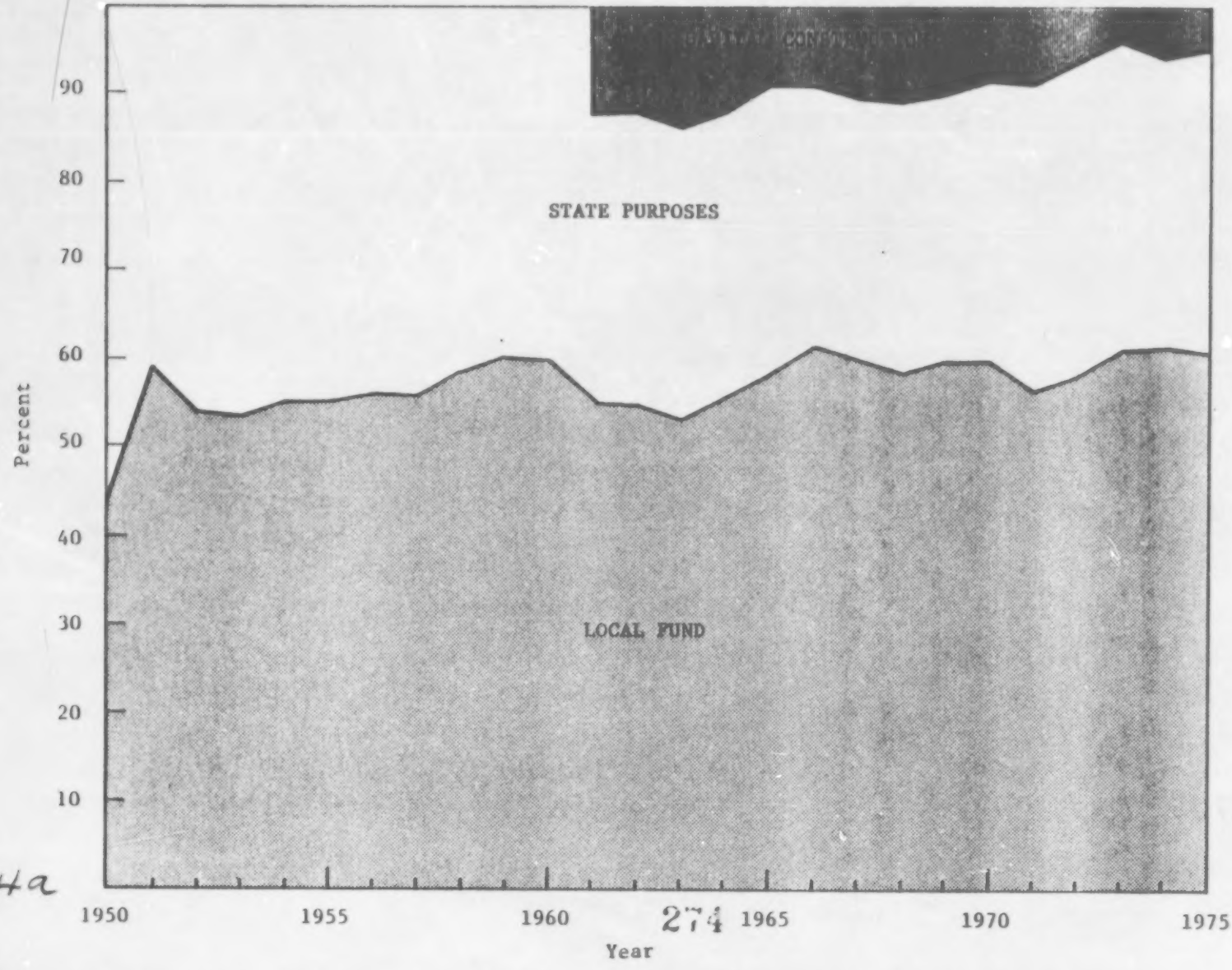

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Figure 5.20. Percent Share Local Fund, State Purposes, and Capital Construction Expenditures are of Total New York State General Fund Expenditures in Current Dollars, 1950-1975.

dollars are projected to follow a similar path. From per capita expenditures of $12.02 in 1975 to $12.47 in 1980, decreasing to $11.64 in 1985, and finally to $10.69 in 1990. Table 5.10 and Table 5.11 contain the statistical data on the projections of expenditures for capital construction (constant dollars).

Project Expenditures for
State Purposes - New York State

Expenditures for State Purposes[1] represents one of the three categories subsumed under General Fund Expenditures. The other two being Expenditures for Capital Construction and the Local Assistance Fund.

Expenditures for state purposes represent a large category of general expenditures. Briefly, such expenditures include monies expended for the state universities, executive departments of state government, legislature, debt service payments not charged by law to a specific fund, audit and control, taxation and finance, judiciary, etc.

The 1950, expenditures for state purposes totalled $373.5 million. As executive departments and agencies expanded, expenditures increased to $757.5 million in 1960 -- a 203 percent increase. By 1970, the figure was $1,992.4 million. Five years later, expenditures for state purposes increased still further to $3,428.9 million. Although expenditures for state purposes increased at a 9.27 percent compound annual rate from 1950 to

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[1] For a more descriptive definition of the State Purposes Fund, see the Annual Report of the Comptroller, State of New York.

TABLE 5.10

NEW YORK STATE PROJECTED EXPENDITURES IN CONSTANT DOLLARS
(In Millions)

YEAR	TOTAL GENERAL EXPENDITURES	STATE PURPOSES	CAPITAL CONSTRUCTION	LOCAL ASSISTANCE FUND			
				TOTAL	EDUCATION	SOCIAL SERVICES	OTHER
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1975 (ACTUAL)	4,272.2	1,532.7	219.4	2,520.1	1,314.9	617.6	587.6
			PROJECTED				
1976	4,275.9	1,533.4	243.1	2,499.4	1,284.9	617.3	596.2
1977	4,385.6	1,585.1	239.4	2,561.1	1,297.2	637.4	626.5
1978	4,503.3	1,640.0	236.2	2,627.1	1,311.0	658.8	657.3
1979	4,617.6	1,694.3	232.7	2,690.6	1,322.9	679.9	687.8
1980	4,727.5	1,747.5	228.8	2,751.2	1,332.7	700.6	717.9
1981	4,843.2	1,801.4	217.3	2,824.5	1,348.2	724.8	751.5
1982	4,983.2	1,859.8	219.0	2,904.4	1,365.8	751.0	787.5
1983	5,136.7	1,923.7	221.0	2,992.0	1,399.1	779.7	813.2
1984	5,302.0	1,993.9	219.4	3,088.7	1,410.0	811.1	867.6
1985	5,448.8	2,057.5	216.9	3,174.4	1,427.8	857.9	888.7
1986	5,774.1	2,276.5	214.8	3,282.8	1,464.1	881.2	937.5
1987	6,007.6	2,359.8	213.3	3,434.5	1,504.9	926.2	1,003.4
1988	6,270.9	2,454.9	209.7	3,606.3	1,545.2	972.5	1,008.6
1989	6,398.4	2,549.0	206.7	3,642.7	1,590.9	1,023.9	1,027.9
1990	6,539.3	2,633.7	202.8	3,702.8	1,635.0	1,072.8	995.0

For Constant Dollars, 1950 = 100.
Note: See end of chapter for data source.

TABLE 5.11

NEW YORK STATE PROJECTED PER CAPITA EXPENDITURES IN CONSTANT DOLLARS
(In Millions)

YEAR	TOTAL GENERAL EXPENDITURES	STATE PURPOSES	CAPITAL CONSTRUCTION	LOCAL ASSISTANCE FUND			
				TOTAL	EDUCATION	SOCIAL SERVICES	OTHER
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1975 (ACTUAL)	234.1	84.0	12.0	138.1	72.1	33.9	32.2
			PROJECTED				
1976	234.1	83.9	13.3	136.8	70.3	33.8	32.7
1977	239.8	86.7	13.1	140.0	70.9	34.9	34.3
1978	245.9	89.6	12.9	143.5	71.6	36.1	35.9
1979	251.9	92.4	12.7	146.8	72.2	37.1	37.5
1980	257.6	95.2	12.5	149.9	72.6	38.2	39.1
1981	263.1	97.9	11.8	153.5	73.3	39.4	40.8
1982	269.6	100.6	11.9	157.1	73.9	40.6	42.6
1983	277.4	103.9	11.9	161.6	75.6	42.1	43.9
1984	285.5	107.4	11.8	166.3	75.9	43.7	46.7
1985	292.5	110.4	11.6	170.4	76.6	46.0	47.7
1986	308.8	121.7	11.5	175.6	78.3	47.1	50.1
1987	320.1	125.7	11.4	182.9	80.2	49.4	53.5
1988	332.9	130.3	11.1	191.4	82.0	51.6	57.8
1989	338.4	134.8	10.9	192.7	84.1	54.2	54.4
1990	344.6	138.8	10.7	195.1	86.2	56.5	52.4

For Constant Dollars, 1950 = 100.

Note: See end of chapter for data source.

1975, the rate over the past five years has not decreased but actually increased to 11.47 percent. Last year's rate of increase, i.e. 1975 over 1974, was evern higher -- 12.9 percent. See Table 5.1. Interestingly, even though expenditures for state purposes increased dramatically over the past twenty-five years, they account for less of total general expenditures now than in the past. In 1950, expenditures for state purposes, accounted for 57.5 percent of total general expenditures. Subsequently, the percentage trended downward reaching its nadir in 1966 and 1967 at 29.2 percent. From this low point, the figure reached 35.9 in 1975. Table 5.8 enumerates these data.

The growth in expenditures for state purposes is just as dramatic on a per capita basis as it is on a total expenditure basis. Table 5.3 indicates the per capita expenditures for state purposes totalled $25.04 in 1950. One decade later (1960), the amount was $44.97. Two decades later (1970), it was $109.22. In 1975, the figure was $187.92. Over the last twenty-five years, per capita expenditures for state purposes increased at a compound annual growth rate of 8.4 percent but over the past five years at a 11.46 percent rate.

Inflation did not erode the positive effects of increasing expenditures for state purposes. When current dollars for state purposes are deflated by means of the price deflator, Purchasing Power of the Consumer Dollar, expenditures for state purposes in 1950 constant dollars totalled $373.5 million. Two decades later, the figure was $1,253.3 million. In 1975, the amount was $1,532.7. Thus, over the past quarter century, the

real growth in expenditures for state purposes was 5.81 percent. The effect of double digit inflation, however, was to reduce this rate to 4.11 over the past five years (1970-1975).

The effects of inflation can be analyzed on a per capita basis as well as on a total expenditure basis. In 1950, per capita expenditures for state purposes in 1950 constant dollars totalled $25.04, increasing to $36.52 in 1960, and $67.72 in 1970. By 1975, the figure was $84.00. Despite inflation and increasing population, over the past twenty-five years, per capita expenditures for state purposes (constant dollars) increased at a 4.96 percent compound annual real growth rate. Even over the past five years which witnessed double digit inflation, the real growth rate only dropped slightly to 4.4 percent.

Projected Expenditures for State Purposes - New York State. Various statistical procedures were investigated to determine the regression equation having the highest forecasting efficiency. An analysis of various predictive equations revealed that the polynomial regression equation had the highest forecasting efficiency coefficient. The application of this equation yielded the base line data for state purposes expenditures. These data were modified in light of a number of underlying assumptions. Of most importance here is the assumption that there will be neither major program improvements nor major program implementations, and that state agency administrators will make conscientious efforts to maintain personnel increases at the barest minimums. Expenditures for state purposes are

projected to increase from $3,428.9 million in 1975 to $4,922.6 million in 1980. In the subsequent five years, expenditures are projected to rise to $6,904.2 million, and by 1990 will reach $10,409.8 million. The projected rate of growth is 7.7 percent compared to its long term historic trend of 9.3 percent. The pattern of expenditures is projected to change even though the projected growth rate is diminished. For example, in 1975 expenditures for state purposes accounted for 39.5 percent of total general expenditures. In future years this percentage is expected to increase to 36.9 percent in 1980, rising to 37.8 in 1985, and still more to 40.3 percent in 1990.

The impact of state purposes expenditure is also projected to affect appreciably New York State's population. In 1975, per capita expenditures for state purpose amounted to $187.92. By 1980, per capita expenditures are projected to rise to $268.26. A decade from now the figure is projected to be $370.58. In 1990, the per capita figure will rise even more to $548.55. Per capita expenditures for state purposes are projected to increase over the next decade and a half at a 7.4 percent annual rate. This compares to its long term historic growth rate of 8.4 percent. While the projected growth rate differs only slightly from its long term growth rate, it represents a sharp downturn from its 11.46 percent growth rate over the past five years.

Projected Expenditures for State Purposes in Constant Dollars. To assess the projected impact of inflation upon expenditures for state purposes, current dollars were deflated into

1950 constant dollars through the deflator index entitled, Purchasing Power of the Consumer Dollar. Expenditures for state purposes (1950 constant dollars) are projected to rise from $1,532.7 million in 1975 to $1,747.5 million in 1980. By 1985, the figure is projected to be $2,057.5, rising to $2,633.7 in 1990. Thus, while expenditures for state purposes in constant dollars increased 5.8 percent over the past quarter century, the real growth rate over the next decade and a half is projected to be only 3.7 percent. Moreover, should inflation rise at a more rapid rate than projected for the future, the real growth in expenditures for state purposes would be considerably less.

The effects of inflation upon expenditures for state purposes can also be portrayed by per capita expenditures in constant dollars. In 1984, per capita expenditures for state purposes in constant dollars totalled $84.00. By 1980, we project the figure to be $95.23, increasing to $110.44 in 1985. By 1990, the figure is projected to rise still further to $138.78. Per capita expenditures for state purposes in constant dollars are projected to have a real growth rate from 1975 to 1990 of 3.4 percent. This is more in keeping with its real growth rate over the past five years of 4.4% percent than its long term historic real growth rate of 4.96 percent.

Local Assistance Fund
Expenditures New York State

The third category of the General Fund is the Local

Assistance Fund. Out of this fund expenditures are made to local governments for their general purposes (e.g. state-local revenue sharing) and for specific purposes (e.g. education, social services, etc.).

Local assistance expenditures were projected and then disaggregated into several of its various components. Although local assistance expenditures were subdivided into three categories for projective purposes, all its major components were included under actual expenditures. For example, Table 5.1 contains actual expenditures for education, social services, health and environment, mental hygiene, transportation, housing, revenue sharing, and miscellaneous expenditures. Table 5.7 contains projected expenditures for the Local Assistance Fund subsumed under which are the following categories: (1) education; (2) social services; and (3) all other expenditures. It is important to note that the separate components under all other expenditures were analyzed separately and so projected. The other categories, however, were lumped together to focus on education, our main concern, and to facilitate the writing of this research report. Tables 5.1 and 5.2 depict the numerical data on expenditures out of the Local Assistance Fund in current and constant dollars. Tables 5.3 and 5.4 contain the data on per capita expenditures, current and constant, out of the Local Assistance Fund.

In 1975, the expenditures out of the Local Assistance Fund totalled $5,637.7 million. Out of the analyses of the separate expenditure categories subsumed under this fund, expen-

ditures were projected to increase to $7,749.6 million in 1980, to $10,652.5 million in 1985, and to $14,635.6 million in 1990. While the Local Assistance Fund grew at a compound annual growth rate of 10.1 percent over the past quarter century, only a rate of 6.6 percent is projected here.

Projected Expenditures for Education New York State

Expenditures for education[1] out of the Local Assistance Fund include mainly outlays for the support of the public elementary and secondary schools. It also includes monies for municipal colleges, community colleges, school lunch and milk program, aid to libraries, physically handicapped children, support of some functions of nonpublic schools such as transportation and textbooks, and adult recreation programs.

In 1950, expenditures for education totalled $228.2 million. One decade later (1960) expenditures rose to $637.9 million -- almost a three-fold increase. By 1970, expenditures for education more than tripled over the previous decade to $2,187.7 million. In 1975, the figure increased further to $2,941.5 million. Thus, expenditures for education grew at a compound annual growth rate of 10.77 percent over the past quarter century. Over the past five years, however, the growth rate has decreased to 6.10 percent.

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[1] For a more descriptive definition of expenditures for education see the Annual Report of the Comptroller, State of New York.

The overwhelming majority of expenditures out of the education fund are made for the public elementary and secondary schools. In 1966 the percentage was 94 percent dropping to 89 percent in 1975. Therefore, an assessment as to the increase in educational expenditures should reflect enrollment trends. In 1950, public school enrollments (Grades K-12) were 1.934 million rising to 2.771 million in 1960. The number enrolled in 1970 increased to 3.506 million, decreasing to 3.406 million in 1975. Over the past quarter century, pupil enrollments increased at a 2.29 percent compound annual rate. Enrollments, however, declined at a 5.5 percent rate over the last five years. State assistance to public elementary and secondary schools may also be analyzed on a per pupil basis.[1] In 1950, state aid for public education amounted to $122.93. By 1960, the figure increased to $221.41 -- almost doubling. In 1965, state assistance per pupil increased to $386.57, rising to $592.27 by 1970, and increasing still further to $764.04 per pupil in 1975.

Per Capita expenditures for education amounted to $15.30 in 1950. One decade later the figure more than doubled to $37.87. During the sixties per capita expenditures for education more than tripled to $119.93 in 1970. By 1975 the figure reached $161.20. Over the 1950-1975 time span, per capita expenditures increased at a 9.88 percent growth rate.

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[1] Cost per pupil represents only state aid to public elementary and secondary schools and pupils are weighted average daily attendance. Data were obtained from the State Education Annual Report.

The rate slowed to 6.09 percent over the past five years. Figure 5.2 graphically depicts the yearly percentage growth rates for educational expenditures. The numerical data are contained in Table 5.6. Educational expenditures have consistently increased positively over the past quarter century, varying from a high of 21.5 percent in 1958 to a low of 1.1 percent in 1972. Last year, 1975, increased only 4.4 percent over 1974's expenditures.

Table 5.8 shows that educational expenditures accounted for 45.1 percent of total general expenditures in 1950. This ratio continued until 1964 when it peaked out at 66.8 percent. From that year on, educational expenditures as a percent of total expenditures trended downward, reaching 52.2 percent in 1975.

State assistance to education more than kept pace insofar as inflation is concerned. In terms of real growth, the state expended $228.2 million (1950 constant dollars) for educational purposes in 1950. Inflation was not particularly rampant in the fifties so that by 1960 state expenditures for education more than doubled in real growth to $518.0 million. Inflation was practically nonexistent in the first half of the 1960's, increasing at rates of slightly more than one percent. By 1970, state expenditures for educational purposes more than doubled again to $1,356.4 million. Inflation in the early seventies, however, soared, double digit inflation was experienced, and although state expenditures for education increased, the rate of increase was insufficient to compensate for inflation. In 1975, state assistance for education (1950 constant dollars) totalled $1,314.9 million. Thus, over the past quarter

century (1950-1975), state assistance for education grew at a real growth rate of 7.26 percent. This contrasts with negative real growth rate of 0.62 percent over the past five years (1970-1975).

Per capita state expenditures for education expressed in constant dollars represents another viewpoint of analyzing the impact of inflation upon educational expenditures. In 1950, state expenditures for education totalled $15.30. By 1960, per capita expenditures doubled to $30.75. In 1970, the figure was $74.35 -- more than doubling again. Because of the high rates of inflation in the early years of the seventies, state assistance for education did not grow appreciably. In fact, after reaching its highest level of $77.74 in 1973, per capita expenditures for education (in constant dollars) declined to $75.36 in 1974 and to $72.06 in 1975. Over the past twenty-five years, the real growth in per capita expenditures was 6.39 percent compounded annually. A declining rate of some 0.62 percent of increase, however, has been experienced over the past five years.

Projected State Expenditures for Educational Purposes - New York State. As indicated previously, state expenditures for education were projected utilizing several different regression equations. State assistance for educational purposes was projected from the measure itself as well as from the disaggregation of expenditures out of the Local Assistance Fund.

The regression equation having the highest forecasting efficiency coefficient was of the natural logarithm type. This

equation was used to compute base line data for educational expenditures from 1976 to 1990.

These base line data were modified in accordance with a number of underlying assumptions previously enumerated. Of great interest here is the number of pupils to be educated in the future. Because state aid to public elementary and secondary schools represent the largest single item of total state assistance for all educational purposes, pupil enrollments, teachers salaries, and pensions are cost determinants that will affect state expenditures for education. From 3.406 million pupils in public schools (Grades K-12) in 1975, we project 3.076 million in 1980 -- a decrease of 0.33 million pupils. Enrollments are projected to decrease still further to 2.860 million in 1985. From this point, public enrollments are projected to increase at the elementary school level but still trend downward at the high school level[1] so that by 1990, public enrollments are projected to increase to 2.894 million. Educational personnel are not projected to increase over the 1975-1990 period, although teachers for the handicapped are projected to increase as greater attention is focused on special educational programs for the handicapped by the Federal and state governments. Increases in this area, however, will be offset by pupil decreases in other areas so that the net result should be nearly the same staffing rations in the future that exist presently. Educational pensions, moreover, are

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[1] For detailed public and private school enrollment projections, see Research Study #10, Pupil Population Projections, New York State.

assumed not to be liberalized further. In fact, the assumption of part of the pension contribution by the individual employee is projected to be maintained and even increased slightly in early eighties. Also, noted were Goldmark's[1] assumptions regarding state assistance to education.

In accordance with these assumptions, expenditures for education in New York State out of the Local Assistance Fund are projected to increase from $2,941.5 million in 1975 to $3,754.2 million in 1980 -- a 5.00 percent growth rate. In 1985, expenditures for education are projected to increase to $4,791.4 and by 1990 to $6,462.3 million. The rate for 1975-1990 is projected somewhat lower at 5.4 percent although state assistance for education increased at a 10.8 percent growth rate (1950-1975). Moreover, state aid per pupil is not projected to increase at its historic compound annual growth rate of 7.58 percent. If this were assumed to occur, then, the entire $6,462.3 million projected for state assistance for education would be diverted only to cover state assistance for public elementary and secondary schools. This would reflect a state aid per pupil assistance of almost $2,300 per pupil. A level of $2,000 per pupil is more realistic in 1990. Even at this level, public elementary and secondary state assistance would account for some 88 percent of all state expenditures for

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[1] For an excellent discussion of underlying assumptions involved in projecting New York State revenue see State of New York Five Year Projection of Income and Expenditures General Fund Fiscal Years 1976-77 Through 1980-81, Hugh 1. Carey, Governor, Peter C. Goldmark, Jr., Director of the Budget, February 19, 1976 submitted as supplement to the Executive Budget as required by Article VII of the Constitution and Section 22 of the State Finance Law.

education.[1] Table 5.7 enumerates the data on state expenditures for education in current dollars.

On a per capita basis, expenditures for education are projected to grow at a 5.1 percent growth rate over the years 1975 to 1990. From a total of $161.20 in 1975 per capita expenditures are projected to increase to $204.59 in 1980, increasing to $257.17 in 1985, and rising to $340.53 in 1990. This is almost half of its long term historic growth rate of 9.9 percent. Table 5.9 contains the data for projected per capita state expenditures for education.

Projected State Expenditures for Educational Purposes in Constant Dollars - New York State. Because of reducing rates of increase in state expenditures for education and because of the eroding effects of inflation, real growth (in 1950 constant dollars) is not projected to occur over the next decade as it did over the past two decades. Table 5.11 reveals the evidence for that statement. In 1975, state expenditures for education (in constant dollars) totalled $1,341.9 million, increasing only to $1,332.7 million in 1980, to $1,427.8 million in 1985, and to $1,635.0 million in 1990. The rate of real growth over this period is a mere 1.5 percent compared to the 7.3 percent experienced over the past quarter century (1950-1975).

State assistance for education will decline as a pro-

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[1] In 1970, this ratio was 93%; in 1971, 95%; in 1972, 89%; in 1973, 92%; in 1974, 90%; and in 1975, 88%. See 1975 Annual Financial Report of the Comptroller Part II. Financial Statements, Arthur Levitt, Comptroller, State of New York, pp. 44-45.

portion of total expenditures for the period 1975-1990. In 1975, state assistance for education amounted to 30.8 percent of all general expenditures in New York State. We project this ratio to decrease to 28.2 percent in 1980, to 26.2 percent in 1985, and to 25.0 percent in 1990.

On a per capita basis, state expenditures for education (in constant dollars) are projected to go from $72.06 in 1975 to $72.63 in 1980. Over the next five years (1980-1985), the increase is projected to rise to $76.64. This rise can be associated more with a projected decline in inflation than an increasing rate of expenditures. From 1985-1990, the per capita rise in state expenditures for education (constant dollars) is projected to increase to $86.16 in 1990. This rate of real growth, 1.2 percent is considerably below its long term historic rate of 6.39 percent.

Projected Social Services
Expenditures - New York State

Expenditures for social services[1] are those outlays made for income maintenance (i.e. aid for the blind, aid to dependent children, aid to disabled, and old age assistance), medical assistance, local administrative costs for social services, food program, child day care, emergency assistance to adults, and all other social services assistance.

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[1] For a more descriptive definition of social services expenditures see, Annual Report of the Comptroller, State of New York.

In 1950, New York State spent $143.5 million for social services. As the composition of the state's population changed, so did expenditures for social services. By 1960, expenditures for social services reflected the mass migration of the poor to New York increasing more than five fold to $877.7 million in 1970. Over the past five years (1970-1975) expenditures for social services increased 1.6 times to $1,381.7 million in 1975. Table 5.1 contains the actual expenditures for social services. What explanations can be offered for such increases in social services?

In 1963, the number of welfare recipients (AFDC) in New York State totalled about 436,000, increasing to 1.287 million in 1972, and decreasing to 1.215 million in 1975. On the average, each welfare recipient received $41.23 in 1963, $82.11 in 1972, and $91.83 in 1975 -- reflecting a 6.9 percent annual increase. Although welfare recipients dropped some 72,000 from 1972 to 1975, expenditures for welfare increased 26 percent. Social service expenditures in New York State increased from 1950 to 1975 at a 8.81 percent compound annual rate. Over the past five years, the rate of increase was 9.5 percent. On the other hand, over this same period, welfare expenditures increased 11.28 percent.

On a per capita basis, expenditures for social services amounted to $9.62 in 1950. One decade later the figure bearly increased to $9.94. Per capita expenditures for social services increased to $48.11 in 1970 -- almost a five fold increase. In 1975, the figure was $75.72. Per

capita expenditures for social services increased at a compound annual rate of 8.60 percent over the past twenty-five years. Per capita expenditures for social services, however, increased at a 9.50 percent rate over the past five years (1970-1975).

Table 5.8 reveals the degree to which social service expenditures reflect that portion of total general expenditures in New York State. In 1950, expenditures for social services represented 28.3 percent of total general expenditures. This ratio trended downward reaching 14.0 percent in 1964 -- its lowest ratio over the past quarter century. From this point, social services expenditures accounted for greater percentages of total expenditures, rising to 26.6 percent in 1969. In 1975, the figure was 24.5 percent.

What has inflation done to expenditures for social services in New York State? Table 5.2 reveals the facts. When current dollars for social service expenditures are deflated by means of the Purchasing Power of the Consumer Dollar Index (1950 = 100), outlays went from $143.5 million in 1950 to $136.0 million in 1960. Despite increasing needs in the area of social services over the 1950-1960 decade, inflation wiped out a $24 million current dollar increase and more. Social Service increases during the 1960-1970 decade were sufficient to compensate for inflation. It must be emphasized that the early sixties, however, witnessed inflation encroaching upwards at only slightly more than one percent per year. Thus, the real purchasing power of the expenditures for social services was $544.2 million (constant dollars). Despite increasing rates of

inflation in the seventies, expenditures for social services greatly increased to $617.6 million (1950 constant dollars). Thus, over the past twenty-five years, the real growth in social service expenditures was at a compound annual rate of 6.01 percent. Over the past five years the rate of real growth was only about half again as much, 2.56 percent.

Table 5.4 shows the effects of population and inflation upon expenditures for social services. In 1950, per capita expenditures for social services (constant dollars) amounted to $9.62. This figure dropped to $8.07 in 1960, rising to $29.83 in 1970, and to $33.85 in 1975. The real growth rate in per capita expenditures for social services (1950-1975) was 5.16 percent. Over the past five years (1970-1975), the rate was only 2.56 percent. The 1973 percentage increase, however, was 1.4 percent; the 1974 increase, -7.6 percent; and the 1975 increase, 1.2 percent. See Figure 5.3.

Projected Expenditures for Social Services - New York State. As with state expenditures for education, expenditures for social services were projected from the disaggregation of the components of the Local Assistance Fund as well as from the measure itself. Several different statistical methods were utilized to determine the regression equation having the highest forecasting efficiency. The regression equation having the highest forecasting efficiency was of the polynomial type. This regression equation was utilized to project future base line data for social services expenditures. These base line data were modified in light of a number of underlying assumptions.

General assumptions were indicated earlier in Chapter 2 and will not be repeated here. Some specific assumptions in the functional area of social services are that welfare recipients will decline slightly, both because of a modest increase in New York State's population and because of a significant decline in the emigration of poor people to New York. A modest annual increase of one percent does not appear to be overoptimistic in light of the present Federal Government's commitment to jobs and job training programs. No increases in State standards of assistance are projected, except those required by court proceedings and changes in the current shelter policy. The Federalized Supplemental Security Income Program is projected not to be changed for this period, at least not radically. Because of the decline in welfare recipients and the slightly improved economic outlook, welfare case workloads are projected to drop slightly. In accordance with the base line projections for social services and as modified by the assumptions herein discussed, expenditures for social services are projected to increase from $1,381.7 million in 1975, to $1,973.5 million in 1980, to $2,818.7 million in 1985, and to $4,240.3 million in 1990. The compound annual growth rate projected is 7.8 percent which is lower than its long term historic growth rate of 9.5 percent.

Expenditures for social services are projected to account for slightly larger percentages of total general expenditures in New York State. From 14.5 percent in 1975, the ratio is projected to increase to 14.8 percent in 1980, increasing to 15.4 percent in 1985, and to 16.4 percent in 1990.

On a per capita basis, expenditures for social services are projected to increase at a 7.5 percent compound annual growth rate. This is lower than its 8.8 long term historic growth rate and considerably lower than its 9.5 percent rate. Per capita expenditures are projected to increase from $75.72 in 1975 to $107.55 in 1980. In 1985, the projected figure is $151.29, rising still further to $223.45 in 1990.

Projected Expenditures for Social Services in Constant Dollars -- New York State. Of course, the real test of increasing expenditures for social services is how much the dollars allotted to this functional area will buy in terms of goods and services. Not only must the number of dollars being provided be considered but so must the effects of inflation. Table 5.7 reveals how inflation will affect the projected social services dollar. For example, expenditures for social services (in 1950 Constant Dollars) was $617.6 million in 1975. As a function both of current dollars and inflation, the figure of $700.6 million is projected for 1980. By 1985, the amount is projected to increase to $857.9 million, and to $1,072.8 million in 1990. The real growth rate over the past twenty-five years was 6.0 percent. The projected rate of growth for 1975-1990 is only about two-thirds as much, 3.7 percent.

Real growth may also be expressed in per capita expenditures for social services in constant dollars. In 1975, per capita expenditures for social services was $33.85. The figure is projected to increase to $38.18 in 1980, to $46.04

in 1985, and to $56.53 in 1990. Per capita expenditures for social services in constant dollars are projected to be only 3.5 percent over the period 1975 to 1990. This rate is below its 5.74 long term historic trend.

Projected All Other Expenditures - New York State

All other expenditures in New York State include herein a number of important categories. They were subsumed under the rubric all other expenditures[1] not because of their unimportance but because the major focus of this research study centers on educational expenditures. Since time was limited, these categories, exceedingly important to persons in those functional areas, have been lumped together and subsumed under one catchall category. Some of these categories are expenditures for health and environment, mental health, transportation, housing, state-local revenue sharing, and other miscellaneous expenditures. Although separate projections were made for these categories, they were not shown. The actual expenditures for these various categories of expenditures, however, were tabulated and are enumerated herein. The years covered are those of the past quarter century (1950-1975). Tables 5.1, 5.2, 5,3, and 5.4 contain data on the various major functions of all other expenditures. Table 5.6

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[1] For a more descriptive of other expenditures see Annual Report of the Comptroller, State of New York.

contains data on yearly percentage growths.

Health and Environment Expenditures. Expenditures for health and environment reflect outlays for public health work, sewerage operations, laboratory services, blood banks, nursing homes, operation of medical clinics, rodent control, public water systems, narcotics addition control, etc. In 1950, expenditures for health and environment totalled $19.7 million (current dollars). By 1975 expenditures for these purposes had increased to $177.7 million for a compound annual growth rate of 9.20 percent.

Mental Health Expenditures. Expenditures for mental health were first recorded separately in 1967, reflecting the legislature's desire to set up a separate mental health unit and to record its costs. In 1967, expenditures for mental health amounted to $34.8 million (current dollars). Seven years later in 1975, expenditures totalled $80.1 million for a compound annual growth rate of 10.98 percent.

Expenditures for Transportation. Expenditures for transportation out of the Local Assistance Fund reflect outlays for mass transit operating assistance, town highway improvement programs, town highways, county and city share of motor vehicle taxes, county and city share of motor fuel tax, etc. Expenditures for transportation purposes totalled $25.4 million in 1950. By 1974, expenditures had increased to $109.8 million. In 1975, expenditures for transportation jumped to $210.8 million. Most of this $101 million increase reflected aid payments under the newly enacted mass transportation assistance programs for trans-

portation authorities in the state. The largest of these authorities, the Metropolitan Transportation Authority, received $90 million in such aid for fiscal 1975. Clearly, the computation of a compound growth rate including the fiscal year 1975 would distort drastically historic trends. Consequently, a compound annual growth rate over the 1950 to 1974 period was computed. The rate was 6.29 percent.

State - Local Revenue Sharing. Expenditures for state-local revenue sharing reflect funds which may be used for any legitimate governmental purpose. Presently, the aid formula requires that local governments receive 18 percent of State personal income tax revenue. In 1950, state - local revenue sharing amounted to $84.3 million. By 1975, state - local revenue sharing funds increased to $596.8 million (current dollars) for a quarter century compound annual growth rate of 8.14 percent.

Miscellaneous General Expenditures. Miscellaneous general expenditures represent a hodge podge of expenditures for numerous worthwhile purposes which are not or cannot be subsumed under the variously defined categories of general expenditures. Moreover, as new programs are enacted and funded, the items under miscellaneous tend to contract or expand never being reasonably constant over a long time period. Thus, miscellaneous expenditures tend to be exceeding haphazard and erratic, complicating immensely the task of forecasting reasonable data. For example, in 1950, miscellaneous expenditures amounted to $4.1 million (Current Dollars).

By 1975, the amount was $136.3 million. Examining a growth rate not from 1950 to 1975, but from 1951 to 1974, yielded a 9.19 percent growth rather than 15.05 percent. The latter growth rate is too high when the cyclical nature of miscellaneous general expenditures is considered.

Projected All Other Expenditures. The various categories subsumed under all other general expenditures were discussed at the outset of the section. As with expenditures for education and for social services, all other expenditures were projected from two different directions. One method projected total Local Assistance Fund and disaggregated the projections into expenditures for all other expenditures, education, and social services. The second procedure projected data for all other expenditures from the separate values of the measure itself. A third procedure was also utilized -- that of aggregating all other expenditures from the separate projections of its component parts.

The projection of all other expenditures in New York State as with previously discussed projections are under girded by a number of general and specific assumptions. The general assumptions were previously enumerated and discussed in a previous chapter. Some of the specific detailed assumptions are treated herein.

Expenditures for health and environment and mental health are projected to rise more rapidly than state expenditures in general. This reflects the increased operating

costs associated with the opening of a new hospital and science health center. Personnel are projected to be increased for mental health purposes reflecting improved mental health care. Transportation expenditures are projected to rise because of mass transit projects, rail preservation, new airport development highway construction and renovation, etc. Housing and community development costs are projected to rise modestly because of tenant assistance. Consumer protection and economic development expenditures are projected to rise modestly because of the state's commerce department's promotional efforts regarding state products, commencement of quarter horse racing, and expansion of programs attracting industry to New York State. Environmental expenditures are projected to rise because of expanded programs dealing with the state's natural resources including training sanitation workers, conducting flood insurance hydrologic studies, and preparing area wide water basin studies. Recreational and cultural enrichment expenditures are projected also to rise modestly. This is because of increased operating costs associated with the opening of new parks and historic sites. Public safety expenditures are also projected to rise because of increased operating costs for new correctional facilities as well as other services for increased numbers of parolees. These are a number of the factors projected to affect all other expenditures in New York State.[1]

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1 For an excellent, detailed treatment of underlying assumptions regarding revenues and expenditures in New York State, see Peter C. Goldmark, Jr., State of New York Five Year Projection of Income and Expenditures General Fund Fiscal Years 1967-77 Through 1980-81. Hugh L. Carey, Governor, Peter C. Goldmark, Jr., Director of the Budget.

All other expenditures totalled $1,314.5 million in 1975. Over the past two and a half decades, all other expenditures increased at a compound annual rate of 9.55 percent. From 1970-1975, the growth rate jumped to 16.12 percent. Table 5.7 contains data on projected expenditures. All other general expenditures in New York State are projected to increase from $1,314.5 million in 1975 to $2,022.5 million in 1980, reflecting a 9.00 percent growth rate. This rate is in line with its long term historic growth rate rather than its past five year rate. All other expenditures are projected to grow some $1,018.6 million over 1980-85. This increase to $3,041.1 million in 1985 reflects a growth rate of 8.49 percent. All other expenditures are projected to increase to $3,933.0 million in 1990 but at a declining growth rate of 5.28 percent. Over the 1975-1990 period, the compound annual growth rate is projected at a 7.6 percent rate.

The large conglomerate of functional expenditures which we called all other expenditures has been projected to account for varying proportions of total general expenditures in New York State. In 1950, these expenditures accounted for 15.3 percent of all expenditures in New York State. By 1970, the figure dropped to 10.0 percent as new programs were added and some dropped. In 1975, the ratio was 13.0 percent. The ration is projected to increase to 15.2 percent in 1980, rising to 16.6 percent in 1985, and dropping slightly to 15.2 percent in 1990.

Viewed in terms of per capita expenditures, all other

expenditures in New York State totalled $9.02 in 1950, increasing to $34.13 in 1970, and to $72.08 in 1975. Per capita all other expenditures increased over the past quarter century at a 8.67 percent rate but at a 16.13 percent rate over the past five years. We do not envision such a large growth rate to occur over the next decade and a half. Accordingly, we have projected a growth rate more in line with its long term historic trend, a slightly lower 7.3 percent rate. Per capita all other expenditures are projected to increase from $72.08 in 1975 to $110.18 in 1980, rising to $163.30 in 1985, and increasing still more to $207.25 in 1990.

Projected All Other Expenditures in Constant Dollars - New York State. As emphasized previously, only to analyze projections in current dollars fails to project the impact of inflation and population growth on the resources of the various state agencies and municipal governments. For this important reason, current dollars were deflated by means of the Purchasing Power of the Consumer Dollar Index. When inflation is taken into account the real dollar value of all other expenditures amounted to $587.6 million rather than the $1,314.5 million (current dollars). Inflation then presumably eroded $726.9 million from current expenditures. Considering the future impact of inflation, all other expenditures (constant dollars) are projected to increase to $717.9 million in 1980 -- a 22 percent increase. Expenditures are projected to rise to $888.7 million (constant dollars) in 1985, and to $995.0 million in 1990. The real growth rate is

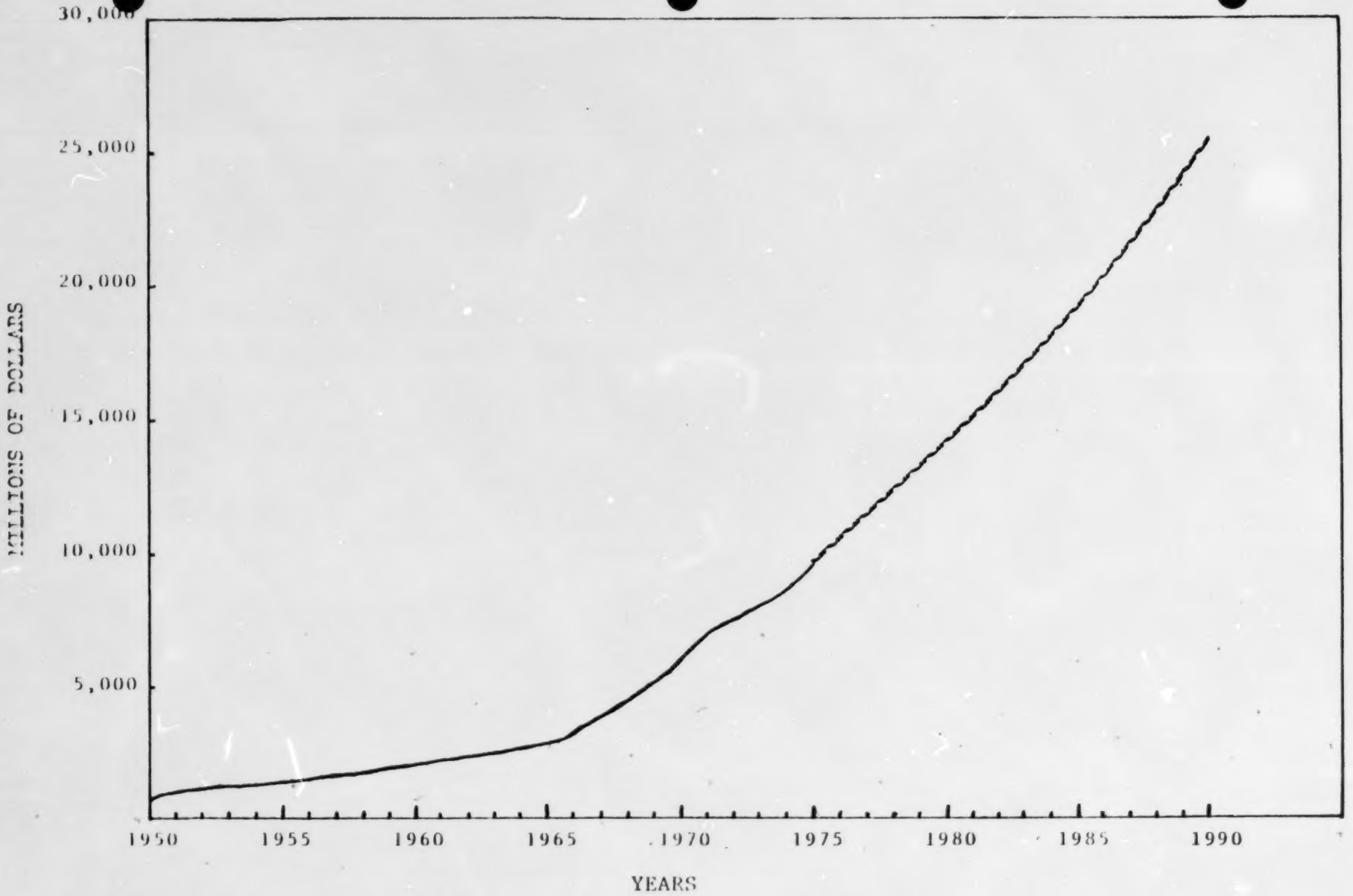

Figure 5.21. New York State Actual Total General Expenditures, 1950-1975, and Projected Total General Expenditures, 1976-1990, in Current Dollars.

projected to be 3.6 percent over the 1975-1990 period which is less than half its long term historic growth rate of 8.1 percent.

An analysis of per capita all other expenditures in New York State in 1950 constant dollars indicates that the real growth in all other expenditures from 1950 to 1975 was 5.22 percent since per capita expenditures went from $9.02 in 1950 to $32.20 in 1975. We project per capita all other expenditures in constant dollars to rise at a lower rate of about 3.3 percent. At this real growth rate, per capita all other expenditures in constant dollars will rise modestly from $32.20 in 1975, to $39.12 in 1975, continuing to $47.70 in 1985, and to $52.43 in 1990.

PROJECTED TOTAL GENERAL EXPENDITURES

Total general expenditures in New York State emanate from expenditures made out of the General Fund. The General Fund is divided into three main categories: Capital Construction Fund, State Purposes Fund, and Local Assistance Fund. Subsumed under the Local Assistance Fund are numerous, helpful and useful functional categories of expenditure. Only the following expenditure categories were selected to be treated separately: (1) capital construction; (2) state purposes; (3) education; (4) social services; and (5) all other general expenditures. Actual total general expenditures were discussed under the section entitled New York State Expenditure Setting.

Detailed data on expenditure growth rates, per capita values, constant dollars, yearly growth rates, percentage allocations of the various expenditure components, and projected values were previously discussed under the separate expenditure components.

Two approaches were utilized to project total general expenditures for New York State. The first procedure involved the projection of total general expenditures from the measure itself and the disaggregation of total general expenditures into its various components. The second dealt with the projection of each component of total general expenditures and the aggregation of these components to obtain projected total general expenditure data. Both procedures resulted in projected base line data. These methods involved straight line regression, polynomial regression, natural logarithm regression, multiple order regression, and Fourier analysis regression.

Although the assumptions utilized to modify the base line data were enumerated under each expenditure category, some of the general assumptions are worth repeating for emphasis. For example, both revenue and expenditure projections assumed that there would be no major wars or depressions, no major program changes or improvements thereto, no major liberalizations of state assistance formulas, federal revenue sharing would continue as would state-local revenue sharing, New York State's population would grow modestly and unemployment rates would decline modestly, but in no case increase significantly over current levels, prices for goods and services would in-

crease at their long term historic growth rates rather than at the rates that occurred over the past five years, and state's economy would develop at the economic levels we projected previously when nation's economic growth was discussed.

Within the framework of these assumptions, total general expenditures are projected to increase from $9,557.4 million in 1975 to $13,316.8 million in 1980. This reflects a growth rate of 6.86 percent from 1975 to 1980. This rate is considerably below that of the 10.01 percent of the past twenty-five years and the 9.02 percent of the past five years. From 1980-1985, we project total general expenditures to increase by $4,967.5 million to $18,284.4 in 1985. This reflects a 6.56 percent growth rate which is slightly below that of the previous five years (1975-1980). Expenditures are projected to increase still further to $25,847.0 million in 1990 reflecting a growth rate slightly higher than the previous decade. Over the entire projection period (1975-1990), we project a compound annual growth for total general expenditures of 6.86 percent.

An assessment of the impact of total general expenditures upon the population of New York State can be accomplished through an examination of per capita data. In 1975, per capital total general expenditures amounted to $523.78. Over the past quarter century (1950-1975) per capita expenditures in New York State increased at a compound annual growth rate of 9.13 percent. We have projected per capita total general expenditures to increase at a 6.6 percent growth rate from 1975-1990. The rates will not be the same over the projected three half decades.

From 1975-1980, a growth rate of 6.7 percent is projected; from 1980-1985, 6.2 percent; and from 1985-1990, 6.8 percent. Thus, per capita expenditures will rise from $523.78 in 1975, to $725.71 in 1980, to $1,362.02 in 1990.

Projected Total General Expenditures In Constant Dollars - New York State. Although reiterated many times previously, the effect of current dollar expenditure levels must be evaluated both in terms of inflation and population growth. Therefore, as was done with other measures, current expenditure dollars were deflated into constant dollars by means of the Purchasing Power of the Consumer Dollar Index. When this was done on a total and per capita basis, the data are revealing. For example, in 1975, inflation eroded $5,285.2 million out of the state's total general expenditure figure when expressed in 1950 constant dollars rather than current dollars. In terms of real dollar growth, total general expenditures in New York State are projected to increase at 2.9 percent which is less than half its long term historic real growth rate of 6.5 percent. Should inflation increase at rates greater than we projected, state and local agencies dependent upon state assistance will fare very poorly. The alternatives would be rather hard to implement -- reduce services, work longer hours for the same pay, increase local taxes principally on property and increase state taxes primarily on personal income.

Expenditures expressed on a per capita basis reveals the same picture. Per capita total general expenditures in New

York State (1950 constant dollars) increased at a 5.7 percent rate over the past 25 years. Because of inflation and the projected level of expenditures and population, the real growth rate from 1975-1990 is projected at less than half its long term historic growth rate, or 2.6 percent. Per capita expenditures (constant dollars) are projected to increase from $234.13 in 1975, to $257.63 in 1980, and to $344.59 in 1990.

NEW YORK STATE DEBT AND DEBT SERVICE PAYMENTS

A discussion of revenues and expenditures over the past quarter century and for the next decade and a half would be incomplete without an assessment of the impact of state debt upon revenues and expenditures. Prior to 1960, state debt in New York State dealt almost exclusively with full faith and credit debt. It is necessary to describe debt payments and outstanding indebtedness to analyze three types of transactions involving debt: (1) full faith and credit or direct state debt; (2) lease - purchase agreements or indirect debt; and (3) other debt commitments such as those which the state has with certain public authorities for capital financing programs. Because this study focuses primarily on revenues and expenditures as they impact on local school districts, debt will not be studied in detail in this study. Table 5.12, however, depicts the outstanding indebtedness and debt service payments of local school districts from 1960 to 1974.

TABLE 5.12

OUTSTANDING INDEBTEDNESS AND DEBT SERVICE PAYMENTS FOR NEW YORK STATE LOCAL SCHOOL DISTRICT ($1000's)*

YEAR (1)	OUTSTANDING DEBT BONDS (2)	NOTES (3)	TOTAL DEBT (4)	DEBT SERVICE PRINCIPAL (5)	INTEREST (6)	TOTAL DEBT SERVICE (7)
1960	2,160,497	101,020	2,261,517	181,772	67,421	249,193
1961	2,302,494	81,395	2,383,889	217,166	73,604	290,770
1962	2,442,448	97,911	2,540,359	217,859	78,236	296,095
1963	2,524,270	75,201	2,599,471	231,728	82,718	314,446
1964	2,661,898	121,055	2,782,953	226,747	85,267	312,014
1965	2,843,197	147,037	2,990,234	259,651	90,409	350,060
1966	2,909,427	207,946	3,117,373	261,015	97,768	358,783
1967	3,003,070	295,241	3,298,311	285,947	106,229	392,676
1968	3,005,307	481,447	3,486,754	298,680	122,281	420,961
1969	2,992,586	691,409	3,683,995	320,652	131,096	451,748
1970	3,032,127	722,368	3,754,495	391,311	149,317	540,628
1971	3,462,952	581,884	4,044,836	539,283	178,423	717,706
1972	3,722,336	369,689	4,082,025	622,083	190,124	812,207
1973	3,801,671	296,000	4,097,671	488,804	195,936	684,740
1974	3,835,342	342,127	4,177,469	420,183	212,778	632,961

*Special Reports on Municipal Affairs by the STate Comptroller of New York State.

TABLE FOOTNOTES

CHAPTER 5

Table Number	Source
5.1	Annual Financial Report of the Comptroller, State of New York, Fiscal Years 1949-1950 - 1974-1975.
5.2	See data source, Table 2.2, 5.1.
5.3	See data source, Table 5.1, 2.1.
5.4	See data source, Tables 2.1, 2.2, and 5.1.
5.6	See data source, Table 5.1.
5.9	(a) See data source, Table 5.1. (b) From 1976 to 1990, New York State expenditures were estimated by staff members of Section 842, PL 83-80.
5.10	(a) See data source, Table 5.1, 2.2. (b) From 1976 to 1990, New York State expenditures were estimated by staff members of Section 842, PL 83-80.
5.11	(a) See data source, Tables 2.1, 2.2, 5.1. (b) From 1976 to 1990, New York State expenditures were estimated by staff members of Section 842, PL 83-80.

CHAPTER 6

ACTUAL AND PROJECTED EDUCATIONAL REVENUES

NEW YORK STATE

Several years ago, Rosenbaum wrote in the New York Times,[1] "The school system of nearly every large city in the country is in desperate financial straits, teacher layoffs, and reduced services in the schools are the exception rather than the rule."

Not only have some school districts in the United States run out of money which has necessitated curtailed educational programs, but so have some school districts in New York State. In a few instances some school districts in the nation have actually closed down from a few days to several months. Some persons assume that only the nation's great city school districts are in financial straights. The fact of the matter is that many other school districts are also in dire financial straits.

Surely, this invites the question: "Why is public education in such financial trouble in the richest country in the world?" An analysis of this question touches upon the State's resources to support education and its long term projective costs. The answer to this question is the subject of Chapter 6.

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[1] David E. Rosenbaum, The New York Times, "Financial Problems Plague Schools Across The Nation," Monday, March 15, 1972.

PROJECTED REVENUE AND EXPENDITURES
PRELIMINARY ANALYSIS

Chapter 6 assesses the fiscal impact of projected revenue and expenditures upon New York State's economy. Of particular importance here is the impact that state assistance for public elementary and secondary schools will have upon local school governments.

Puryear, Bahl and others[1] have documented well New York State's economic decline relative to the United States over the past several decades. Bahl documents a pessimistic picture of New York State's economy in an excellent paper delivered to the Conference, "Planning for Change: The Care of New York State." Bahl's comparisons are made between New York State and the nation as a whole. Granted that New York's share of the nation's economy has declined, and New York's level of fiscal activity with respect to the rest of the nation has declined. Also granted that New York State will levitate to a lower level of equilibrium with respect to fiscal se. vices. What must be remembered is that this outlook encompasses the relative comparisons between New York State and the rest of the nation. This secion investigates whether or not the impending lower equilibrium levels of fiscal activity will render less public services and thus meet fewer public needs. This relationship is important. Although New York State may not achieve a level of fiscal activity that will enable it to do all the public services it once did, the projected economy may enable

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[1] Ray Bahl, "The Long Term Fiscal Outlook for New York State," mimeographed paper, State University of New York at Binghamton, November 8, 1976.

the state to undertake those services in the public sector that will strengthen rather than weaken its economic activity in the long run. New York's fiscal decline, with respect to the rest of the nation, will necessitate endeavors to increase productivity, to undertake only essential capital projects, and to promote more efficient and economical service operations. It is important to note that economic decline relative to the nation as a whole is not necessarily a decline within the state's economy itself. It simply means that New York's economy will not expand as rapidly as the Nation's economy. It does not imply that New York's economic activity will be lower than before.

The Bureau of Economic Analysis[1] recently projected per capita personal income and employment both for the nation and for individual states. New York per capita income (1967 dollars) is projected to increase from $4,331 in 1971, to $5,785 in 1980, and to $7,338 in 1990. Personal income (1967 dollars) is projected to increase from $79.5 billion in 1971, to $112 billion in 1980, and to $153.7 billion in 1990. Employment is projected to increase from 7.2 million in 1969, to 8.6 million in 1980, and to 9.4 million in 1990. Dividing New York State employment by total population gives a very rough employment rate. Applying this measure, New York State had an employment rate of 39.8 percent in 1969, a projected 44.2 percent in 1980, and 44.7 percent in 1990. According to the Bureau of Economic Analysis, the United States per capita personal income (1967

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[1] U.S. Department of Commerce, Area Economic Projections 1990, Bureau of Economic Analysis, Government Printing Office, Washington, D.C.

dollars) increased from $2,065 in 1950, to $3,435 in 1969, to $3,544 in 1971, and is projected to increase to $4,780 in 1980 and $6,166 in 1990. Personal income for the United States is projected to increase from $730.6 billion in 1971 to a projected $1,068.5 billion in 1980, and to $1,517.2 billion (1967 dollars) in 1990. Crude employment ratios computed in the same manner as for New York State were 39.4 percent in 1969, a projected 43.0 percent in 1980, and 43.2 percent in 1990.

When per capita personal income (1967 dollars) ratios are calculated, New York State's ratio of the nation's per capita income in 1950 was 1.27; in 1969, 1.23; in 1971, 1.22; in 1980, a projected 1.21; and in 1990, a projected 1.19. While this ratio has declined from 1950 to 1971, the decline from 1971 to 1990 is only half as much, still leaving New York State above the national average. In terms of the crude employment ratio (an unemployment rate would have been infinitely better) New York's ratios are approximately equal the nation's. Moreover, from 1971 to 1990, the Bureau of Economic Analysis projected New York State's personal income to increase at a 3.53 percent compound annual growth rate compared to 3.92 percent for the United States. Clearly, to promote a cautionary environment with respect to New York State's economy is wise, but to engender an obsessively pessimistic climate is not warranted by a number of economic indicators.

THE PROJECTED BUDGET OUTLOOK IN NEW YORK STATE

Chapter 4 dealt with actual and projected New York State revenues. Chapter 5 dealt with actual and projected New York State expenditures. The differences between the two represent budget surpluses or deficits.

Table 6.1 contains the numerical data on expenditures and revenues for New York State from 1950 to 1990. Figure 6.1 graphically portrays the actual surpluses and deficits as well as the projected surpluses and deficits. As these data indicate, from 1950 to 1962 total general revenue exceeded total general expenditures by varying amounts. In 1963, expenditures exceeded revenues by $9.7 million. This trend continued until 1973. In 1973, revenues exceeded expenditures by some $427.2 million. But in 1974, expenditures exceeded revenues by some $106.8 million; and in 1975, by some $427.2 million. Over the next five years 1976-1980, expenditures are projected to exceed revenues by decreasing amounts each year, for example, from $385.0 million in 1976 to $104.3 million in 1980.

Starting in 1981, revenues are projected to increase over expenditures. For this to occur, prudent management of the state's fiscal resources must take place. The surplus of revenue over expenditure in 1981 is projected to be $42.1 million, increasing each year until in 1985 the projected excess is $683.9 million. These surpluses, however, are needed to offset the deficits of previous years.

In the next half decade, from 1986 to 1990, revenues

TABLE 6.1

NEW YORK STATE ACTUAL AND PREDICTED TOTAL GENERAL REVENUES, EXPENDITURES, SURPLUSES AND DEFICITS FOR FISCAL YEARS 1950 TO 1990 IN CURRENT DOLLARS
(Millions of Dollars)

YEAR	REVENUES	EXPENDITURES	SURPLUS OR DEFICIT
1950	905.4	879.7	25.70
1951	928.8	907.0	21.80
1952	1110.1	1010.4	99.70
1953	1132.6	1072.4	60.20
1954	1150.8	1094.5	56.30
1955	1219.5	1178.7	40.80
1956	1378.6	1329.8	48.80
1957	1464.0	1414.3	49.70
1958	1532.0	1480.0	52.00
1959	1635.7	1586.2	49.50
1960	1998.6	1861.3	137.30
1961	2117.5	2065.8	51.70
1962	2366.3	2303.0	63.30
1963	2566.3	2575.0	-9.70
1964	2752.3	2780.8	-28.50
1965	2865.8	2893.5	-27.70
1966	3325.8	3460.0	-134.20
1967	3909.6	4021.5	-111.90
1968	4244.1	4584.9	-340.80
1969	5092.0	5444.5	-352.50
1970	5911.8	6206.6	-294.80
1971	6104.5	6747.5	-643.00
1972	6785.3	7422.3	-637.00
1973	8278.1	7850.9	427.20
1974	8524.5	8631.3	-106.80
1975	9187.1	9557.4	-370.30
1976	9893.5	10278.5	-385.00
1977	10635.6	10963.9	-328.30
1978	11433.2	11696.8	-263.60
1979	12290.7	12479.9	189.20
1980	13212.5	13316.8	-104.30
1981	14203.5	14161.4	42.10
1982	15258.7	15100.7	168.00
1983	16413.9	16102.6	311.30
1984	17644.9	17158.4	486.50
1985	18968.3	18284.4	683.90
1986	20390.2	20048.8	341.40
1987	21920.2	21532.5	387.70
1988	23564.2	23225.4	338.80
1989	25331.6	24421.4	910.20
1990	27231.4	25847.0	1384.4

NOTE: See end of chapter for data source.

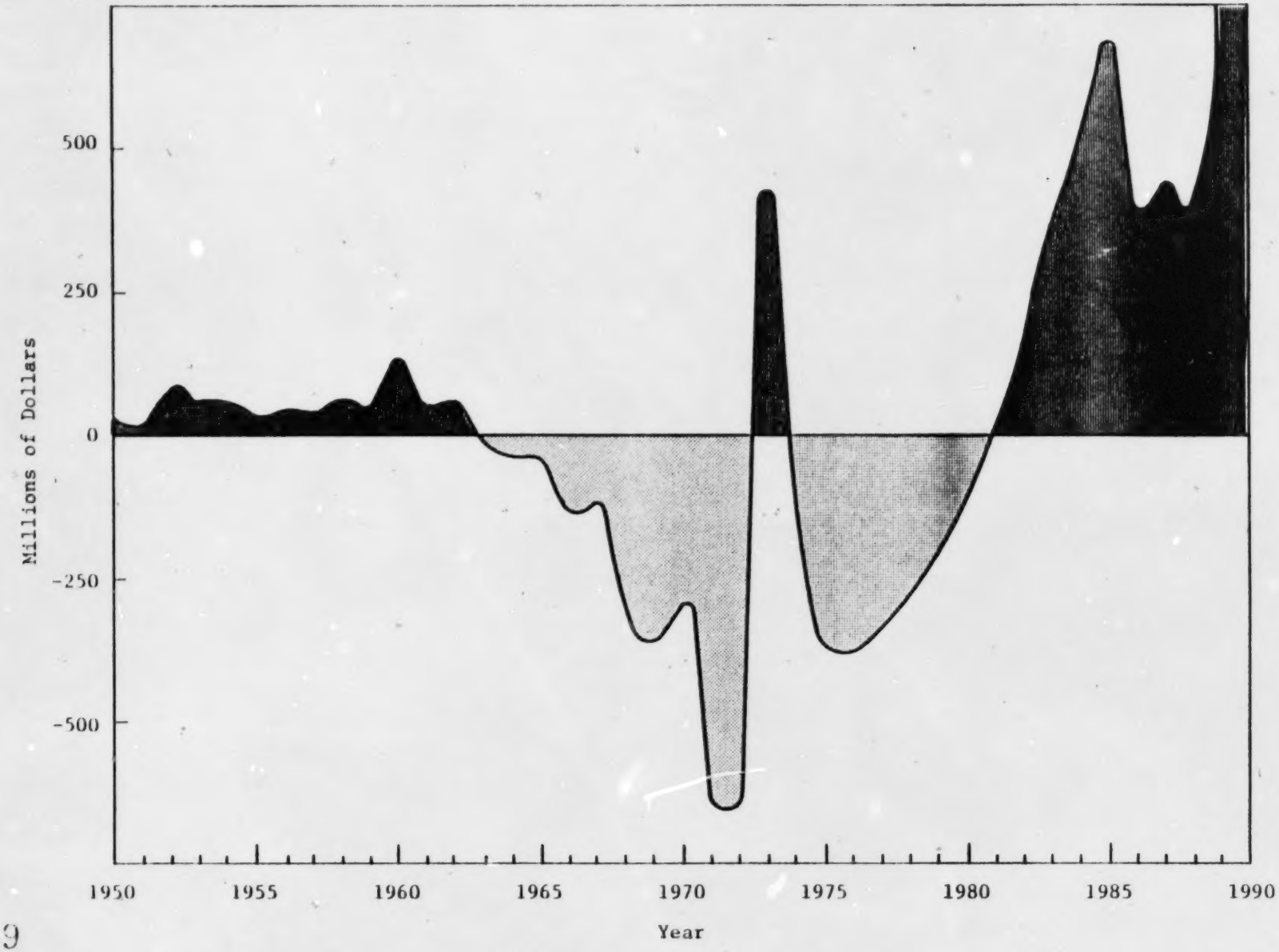

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Figure 6.1. Amount of Surplus or Deficit in Finances for New York State, Actual and Predicted. Based on Total General Revenue and Total General Expenditures.

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are projected to exceed expenditures in each year. But not until 1989, when revenues are projected to exceed expenditures by $910.2 million, can New York State begin to raise its level of services appreciably. In 1990, the surplus is projected to be $1,384.4 million.

Educational Services
Demand Considerations

Table 6.2[1] contains data pertinent to public elementary and secondary schools. Table 6.2 presents such parameters as fall enrollments, full property valuations, property tax levies for schools, total expenditures (less borrowing) for public schools (Grades K-12), state aid for public schools, and Federal aid and all other aid for public schools.

In the fall of 1964, pupils enrolled in New York State public elementary and secondary schools totalled 3.051 million. One decade later, in 1975, pupils enrolled increased to 3.402 million. This reflects a .99 percent compound annual growth rate. Over this same period, school expenditures (less borrowings) increased from $2,312 million to $7,580 million, an 11.4 percent increase. State aid to local districts increased from $1,017.5 million in 1964 to $2,948.0 million in 1974, for a 10.15 percent annual growth rate. Local real property taxes for school purposes increased from $1,245.6 million in 1964 to $3,617 million in 1975, reflecting a 10.17 percent increase. Full property valuations subject to taxation for school purposes increased over

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[1] See Table B and Table G, Financial Data for School Districts, Fiscal Year Ending June 30, 1974. Arthur Levitt, State Comptroller, State of New York, Department of Audit and Control, Division of Municipal Affairs.

TABLE 6.2

NEW YORK STATE SCHOOL DISTRICT FINANCES
PUBLIC ELEMENTARY AND SECONDARY SCHOOLS (K-12)
INCLUDING NEW YORK CITY
1964 - 1975
(In Billions)

FISCAL YEAR END. 6/30 (1)	FALL ENROLLMENT (2)	FULL VALUATION (3)	REAL PROPERTY TAXES (4)	STATE AID (5)	FEDERAL AID AND ALL OTHERS (6)	TOTAL AID (7)	TOTAL EXPENDITURE (Less Borrowings) (8)
1964	3,051,006	89.037	1.246	1.017	.110	2.373	2.312
1965	3,121,717	92.803	1.386	1.087	.184	2.657	2.629
1966	3,176,574	97.926	1.387	1.338	.274	2.999	2.942
1967	3,248,879	100.728	1.576	1.480	.378	3.434	3.350
1968	3,325,477	103.317	1.735	1.622	.398	3.755	3.756
1969	3,397,413	113.897	1.875	2.039	.433	4.347	4.302
1970	3,442,809	120.482	2.174	2.123	.487	4.784	4.850
1971	3,489,245	131.781	2.546	2.368	.566	5.480	5.350
1972	3,503,859	141.318	2.761	2.429	.674	5.864	5.963
1973	3,474,392	158.946	3.072	2.479	.684	6.235	6.181
1974	3,427,560	172.431	3.427	2.597	.777	6.801	6.701
1975	3,401,636	179.433	3.617	2.948	.936	7.501	7.580

Note: See end of chapter for data source. All enrollment data are in thousands.

this decade (1964-1975) 6.57 percent whereas total school expenditures increased 11.4 percent. Table 6.3 contains per pupil data on full property valuations, property tax levies, state aid, total expenditures for education (less borrowings), and all other revenues for education (including Federal Aid).

Many factors affect school costs. Some of the more important ones are salaries, number of teachers, pension payments, supplies and materials. Clearly, pupil increases or even decreases are poor indicators of school cost increases and decreases. For example, while pupils enrolled in the New York public schools increased at a .99 percent compound annual rate from 1964 to 1975, total school expenditures increased 11.40 percent over this same period. State aid for public schools and local tax property levies increased at rates to finance total school expenditures, but what is important is that the full property valuation base on which local contributions depend increased at only a 6.57 percent rate whereas State Personal Income, upon which state income tax heavily depends, increased at a 7.03 percent rate. To finance their share of total school costs, local districts had to increase property tax rates. Apparently, inflation, pensions, numbers of teachers, and negotiated fringe benefits affected school cost increases more than changes in pupil population.

Table 6.4 reflects the percent various fringe benefits, salaries, and Approved Operating Expenditures are of total General Fund Expenditures for Public School Districts in New York State.

Given the state's projected economy in the next decade and a half and the propensity for school costs to increase,

TABLE 6.3

NEW YORK STATE SCHOOL DISTRICT FINANCES
PER PUPIL PUBLIC ELEMENTARY AND SECONDARY SCHOOLS
(K-12) INCLUDING NEW YORK CITY
1964-1975
(In Billions)

FISCAL YEAR END. 6/30 (1)	FALL ENROLLMENT (2)	FULL VALUATION (3)	REAL PROPERTY TAXES (4)	STATE AID (5)	FEDERAL AID AND ALL OTHERS (6)	TOTAL AID (7)	TOTAL EXPENDITURE (Less Borrowing) (8)
1964	3,051,006	29,183	408.25	333.48	36.15	777.88	757.72
1965	3,121,717	29.728	443.95	348.27	58.79	851.01	842.26
1966	3,176,574	30,828	430.41	421.21	86.14	937.76	926.03
1967	3,248,879	31,004	485.22	455.55	116.32	1,057.09	1,031.18
1968	3,325,477	31,068	521.76	487.62	119.61	1,128.99	1,129.59
1969	3,397,413	33,525	551.95	600.23	127.43	1,279.61	1,266.17
1970	3,442,809	34,995	631.33	616.68	141.50	1,389.51	1,408.80
1971	3,489,245	37,768	729.57	678.70	162.18	1,570.45	1,533.28
1972	3,503,859	40,332	787.98	693.30	192.42	1,673.70	1,701.88
1973	3,474,392	45,744	884.32	713.36	196.78	1,794.46	1,778,94
1974	3,427,560	50,279	999.64	757.53	226.80	1,938.97	1,954.75
1975	3,401,636	52,749	1,063.45	866.73	275.12	2,205.30	2,228.28

Note: See end of chapter for data source. All enrollment data are in thousands.

TABLE 6.4

EXPENDITURES FOR SALARIES AND FRINGE BENEFITS
AS A PERCENT OF TOTAL GENERAL FUND EXPENDITURES AND APPROVED
OPERATING EXPENDITURES IN PUBLIC SCHOOL DISTRICTS
NEW YORK STATE

CATEGORY	PERCENT OF TOTAL GENERAL FUND EXPENDITURES					PERCENT OF APPROVED OPERATING EXPENDITURES				
	1970-71	1971-72	1972-73	1973-74	1974-75	1970-71	1971-72	1972-73	1973-74	1974-75
SALARIES										
Teachers	43.7	43.4	43.5	41.4	40.0	54.7	55.2	54.6	51.8	49.5
Other Professional	7.0	7.1	7.0	6.8	7.0	8.8	9.0	8.8	8.6	8.6
Total Professional	50.7	50.5	50.5	48.2	47.0	63.5	64.2	63.4	60.4	58.1
Non Professional	10.9	11.3	11.1	11.5	11.5	13.6	14.4	14.0	14.4	14.3
TOTAL SALARIES	61.6	61.8	61.6	59.6	58.5	77.1	78.6	77.4	74.8	72.4
FRINGE BENEFITS										
Teacher Retirement	7.8	6.6	7.3	9.7	9.5	9.8	8.3	9.2	12.1	11.8
Employee Retirement	0.9	1.0	1.1	1.1	1.1	1.1	1.2	1.4	1.4	1.4
Social Security	2.5	2.4	2.4	2.6	2.8	3.1	3.0	3.0	3.3	3.5
Health Insurance	1.2	1.5	1.6	1.5	1.7	1.5	1.9	2.0	1.9	2.0
Life Insurance	*	*	*	*	*	*	0.1	0.1	0.1	*
Compensation and Disability Insurance	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Union Welfare	-	-	0.5	0.5	0.5	-	-	0.6	0.6	0.7
Other Insurance	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.3
TOTAL FRINGE BENEFITS	12.8	11.9	13.4	15.9	16.1	16.2	15.1	16.9	20.0	19.9
TOTAL SALARIES AND FRINGE BENEFITS	74.4	73.7	75.0	75.6	74.6	93.2	93.7	94.3	94.8	92.3

Note: * indicates less than 0.1 %. See end of chapter for data source.

what might the local districts have to contend with in the coming decade? First, given the present mood of the state's legislature, state assistance for public education will increase slowing and reluctantly. The projected excess of expenditures over revenues for the next few years will harden the line to hold state assistance for public education to minimum increases. Yet because of inflation, educational personnel will exert great pressures to have salaries raised at least to cover the effects of inflation. Increased salaries will reflect increased pension payments. With pupil populations projected to decrease, local districts will have to maintain existing professional staff pupil ratios to keep educational costs down. In some instances, in order not to increase property taxes, professional staff per 1,000 pupil ratios will have to decrease. Some reductions in staff, but not all, could be realized through attrition. There, however, would probably have to be profound consideration given to reductions in staff.

PROJECTED EXPENDITURES (LESS BORROWINGS) AND AID FOR PUBLIC ELEMENTARY AND SECONDARY SCHOOLS NEW YORK STATE

Table 6.5 contains the projections in billions of dollars for New York State. It includes pupil fall enrollments, full valuation of property, real property taxes for schools, state aid, and Federal aid and all other sources of aid. Table 6.6 contains the same data but in per pupil amounts.

TABLE 6.5

PROJECTED NEW YORK STATE SCHOOL DISTRICT
FINANCES PUBLIC ELEMENTARY AND SECONDARY SCHOOLS
(K-12) INCLUDING NEW YORK CITY
1975 - 1990
(In Billions)

FISCAL YEAR END. 6/30 (1)	FALL ENROLLMENT (2)	FULL VALUATION (3)	REAL PROPERTY TAXES (4)	STATE AID (5)	FEDERAL AID AND ALL OTHERS (6)	TOTAL AID (7)	TOTAL EXPENDITURE (Less Borrowings) (8)
1975 (ACTUAL)	3,401,636	179.433	3.617	2.948	.936	7.501	7.580
			PROJECTED				
1976	3,382,369	191.688	3.992	3.166	1.042	8.200	8.260
1977	3,355,497	204.781	4.396	3.392	1.158	8.946	8.981
1978	3,299,112	218.767	4.797	3.602	1.275	9.674	9.678
1979	3,223,821	233.709	5.203	3.801	1.396	10.400	10.365
1980	3,142,935	249.671	5.630	4.003	1.524	11.157	11.075
1981	3,055,733	266.724	6.075	4.203	1.659	11.937	11.802
1982	2,974,706	284.941	6.564	4.419	1.809	12.792	12.592
1983	2,906,825	304.402	6.871	4.663	1.980	13.514	13.486
1984	2,862,267	325.193	7.476	4.959	2.184	14.619	14.544
1985	2,840,413	347.404	8.198	5.315	2.427	15.930	15.829
1986	2,827,247	371,132	8.017	5.714	2.706	17.437	17.268
1987	2,816,205	396.480	9.925	6.147	3.019	19.091	18.852
1988	2,803,115	423.559	10.916	6.607	3.365	20.888	20.566
1989	2,795,892	452.488	12.031	7.118	3.759	22.908	22.482
1990	2,820,073	483.398	13.409	7.754	4.247	25.410	24.854

Note: See end of chapter for data source. All enrollments are in thousands.

TABLE 6.6

PROJECTED NEW YORK STATE SCHOOL DISTRICT
FINANCES PER PUPIL PUBLIC ELEMENTARY AND SECONDARY SCHOOLS
(K-12) INCLUDING NEW YORK CITY
1975 - 1990
(In Billions)

FISCAL YEAR END. 6/30 (1)	FALL ENROLLMENT (2)	FULL VALUATION (3)	REAL PROPERTY TAXES (4)	STATE AID (5)	FEDERAL AID AND ALL OTHERS (6)	TOTAL AID (7)	TOTAL EXPENDITURE (Less Borrowings) (8)
1975 (ACTUAL)	3,401,636	52,749.00	1,063.45	866.73	275.12	2,205.20	2,228.28
			PROJECTED				
1976	3,382,369	56,672.70	1,180.32	936.07	388.13	2,424.52	2,442.19
1977	3,355,497	61,028.52	1,310.04	1,310,04	345.11	2,666.10	2,676.65
1978	3,299,112	66,310.87	1,454.01	1,091.83	386.52	2,932.36	2,933.60
1979	3,223,821	72,494.41	1,613.81	1,179.18	432.91	3,225.90	3,215.23
1980	3,142,935	79,438.80	1,791.17	1,273.51	484.86	3,549.44	3,523.89
1981	3,055,733	87,285.42	1,988.02	1,375.39	543.04	3,906.45	3,862.19
1982	2,974,706	95,787.95	2,206.50	1,485.42	608.20	4,300.12	4,232.95
1983	2,901,825	104,719.75	2,363,82	1,604.26	681.17	4,649.25	4,639.32
1984	2,862,267	113,613.79	2,612.03	1,732.60	762.93	5,107.56	5,084.69
1985	2,840,413	122,307.57	2,886.29	1,871.21	854.48	5,611.98	5,572.82
1986	2,827,247	131,269.75	3,189.35	2,020.90	957.02	6,167.27	6,107.81
1987	2,816,205	148,785.21	3,524.23	2,182.57	1,071.86	6,778.56	6,694.16
1988	2,803,115	151,102.97	3,894.28	2,357.18	1,200.48	7,451.94	7,336.80
1989	2,795,892	161,840.30	4,303.17	2,545.75	1,344.54	8,193.46	8,041.14
1990	2,820,073	171,413.29	4,755.01	2,749.41	1,505.89	9,010.31	8,813.09

Note: See end of chapter for data source. All enrollments are in thousands.

Total General Expenditures (Less Borrowings) for Public Schools - New York State

Total expenditures include current operations expenditures, capital outlay expenses, and debt service payments on principal and interest. Borrowings, including premiums and accrued interest on bonds and notes, have been excluded to maintain a consistency in the trend data.

Included under expenditures are a plethora of categories such as instructional services, operation and maintenance of plant, general control and assundry auxiliary agencies such as library, transportation, recreation, etc.

Total expenditures by schools are projected to increase from $7,580 million in 1975 to $11,075 million in 1980. This reflects a growth rate of 7.87 percent from 1975 to 1980. This rate is considerably lower than the 11.40 percent rate for the last decade and still lower than the growth rate of the last five years, a 9.34 percent increase. From 1980-1985 expenditures will increase by $4,754 million, a 7.4 percent increase and to $24,854 million for total expenditures in 1990, a 9.44 percent increase from 1985. Over the entire projection period, this increase in expenditures represents a compound annual growth rate of 8.24 percent. It again should be noted that this rate is significantly lower than the past decade's growth rate of nearly 11.5 percent and the past five year's growth of 9.4 percent.

New York State officials are trying desperately to control spending in all sectors. The ramifications for school

spending are obvious. In an address before the New York State Council of School District Administrators, Mr. Henrik Dullea, exhorted schools to work with the government "to control" public spending.[1]

The exigencies of the moment will necessarily require control. Efforts must be made surely to "control spending". The question is how much less spending can the various public sectors achieve without drastically reducing services. Expenditures cannot be reduced so drastically so quickly that severe economic repercussions will ensue.

School expenditures are projected to slow to a 7.5 percent growth rate, much less than the nearly 12 percent growth for the last 10 years. Table 6.6 presents the impact of school expenditure projections on pupils.

In the period 1964-1975, per pupil expenditures for education in New York State rose at an 11.3 percent growth rate. In the last five years, the growth was 9.6 percent. The projected growth rate of 9.6 percent results in per pupil expenditures of $3,524 in 1980, $5,573 in 1985, and $8,813 in 1990. These figures reflect a growth rate that is slightly lower than its previous growth.

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[1] From "Remarks of Henrik N. Dullea, Assistant Secretary to the Governor for Education and the Arts, a speech before the New York State Council of School District Administors, January 31, 1977.

Projected State Aid - New York
Public Schools

State aid for public schools (K-12) is projected to increase at a 6.66 percent growth rate over the next decade and a half. This is compared with a 10.16 percent growth for the period 1964-1975 and 6.79 percent for the past five years.

State aid for public schools is projected to decrease to 6 percent for the next five year period, reaching $4.003 billion in 1980, to $5.315 billion in 1985, a 5 percent growth rate, and at a 7.8 percent growth rate in the last half decade, where considerations for expanding services in the public sector can be again considered seriously.

These varying growths for state aid over the next fifteen years for state aid to public schools take into consideration the economic and political climate of the present time. The expenditures of the state for public schools will lessen, in fact must, for a period of time. Only after 1983 can consideration be again made for expanding state aid for schools.

This phenomenon can be expressed as a percent of total aid for schools. In 1964, the state's share of total aid to public and elementary schools was 43 percent. By 1975, the state's share had decreased to nearly 40 percent of the total aid for public schools. Given the status of the projections, state share of total aid will decrease to 36 percent in 1980, to 33 percent in 1985, and to 31 percent in 1990. See Figure 6.3.

State aid for public schools can also be expressed as a per pupil measure. State aid per pupil grew at a 9.07 percent rate from 1964 to 1975. Per pupil aid is projected to

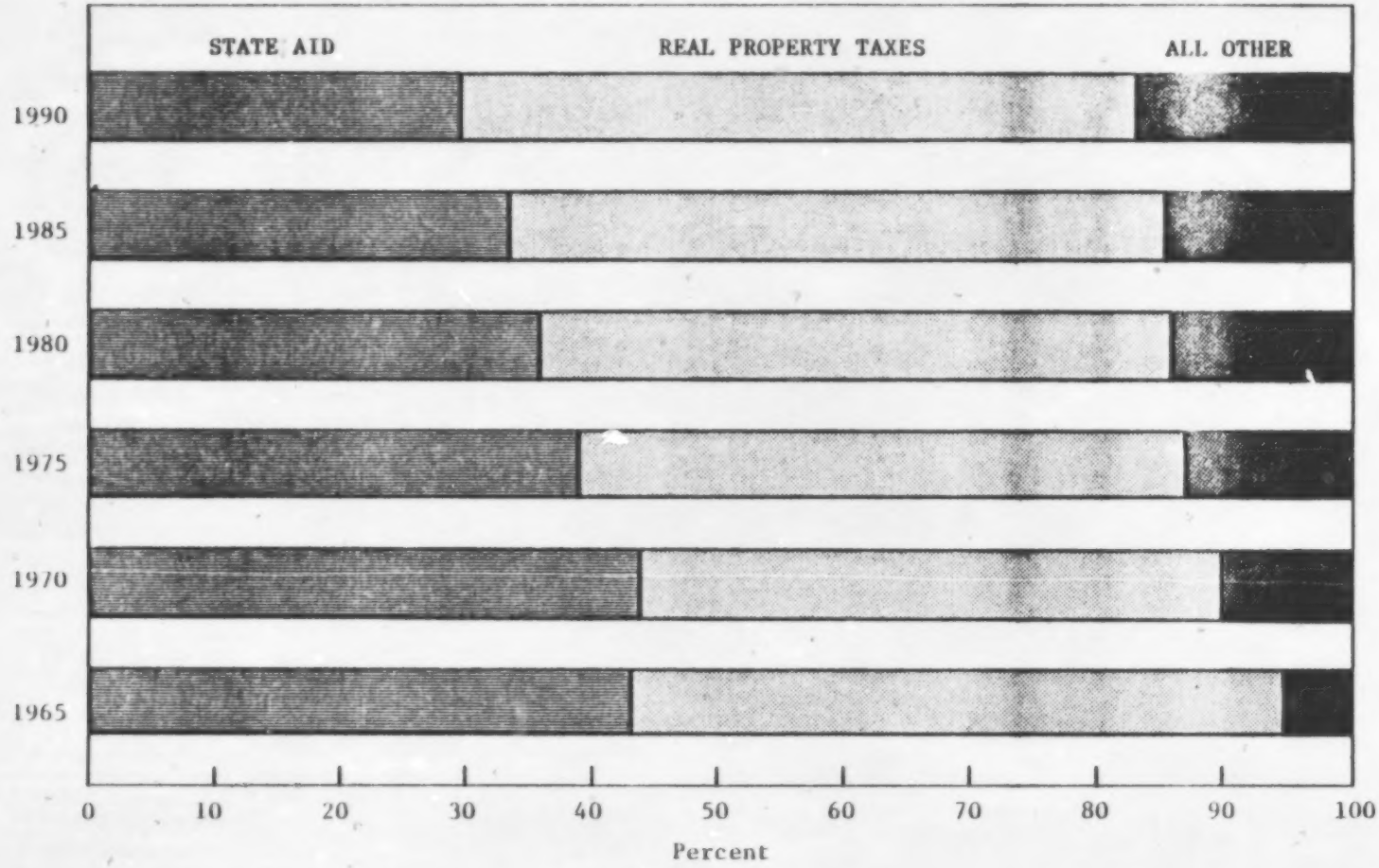

Figure 6.3. Percent that State Aid, Real Property Taxes, and All Other Aid (Includes Federal Aid) are of Total Aid to New York State Public School Districts (K-12). Based on Actual and Predicted Figures.

increase from $867 per pupil in 1975 to $1,375 in 1980, to $1,871 in 1985, and to $2,749 in 1990. This represents an overall growth rate of 8 percent, a rate which is slightly lower than its long term growth rate.

Projected Federal Aid and All Other Aid - New York Public Schools

All other revenue includes federal monies, non-property taxes, and miscellaneous revenues.

Federal and all other revenues for public schools was 4.6 percent of total aid in 1964. In 1975, this category represented nearly 13 percent of aid for public schools.

In current dollars all other revenues was $0.11 billion in 1964. By 1975, it had increased to $0.936 billion, a 21.49 percent rate of increase. The growth rate for 1970-1975 was 13.96 percent. Aid from this source is projected to increase from $0.936 billion in 1975, to $1.524 billion in 1980, and to $2.487 billion in 1990. This represents growth rates of 10.24 percent for 1975-1980; 9.75 percent from 1980-1985; and 11.84 percent from 1985-1990, for an overall compound annual growth rate of 10.61 percent. These growth rates are much lower than the historic growth rate from 1964-1975 of 21 percent. Yet the projected 10.61 percent growth rate will result in all other revenues (including federal aid) accounting for increasing shares of total revenue for public elementary and secondary schools. All other revenues for public education is projected to increase from 13 percent in 1975 to nearly 17 percent in 1990.

All other revenue (including Federal aid) increased from $36 per pupil in 1964 to $275 per pupil in 1975. This represented

a growth rate of 20.26 percent for this period. Aid per pupil from these sources are projected to increase to $485 per pupil in 1980, $854 per pupil in 1985, and to $1,506 per pupil in 1990. This represents an average growth rate of 12 percent, much lower than the long term growth of 20 percent from 1964-1975, and still lower than the last five year's growth of 14.2 percent.

Projected Property Taxes - New York State

Most local revenues comes from property taxes. Historically, in New York State, property taxes have supplied $1.246 billion of aid for public schools in 1964, increasing to $3.617 billion in 1975. This represents a 10.17 percent annual growth.

Real property taxes are projected to increase from $3.617 billion in 1975 to $5.630 billion in 1980. This reflects a growth of 9.25 percent. In 1985, aid from real property taxes is projected to increase to $8.198 billion, a 7.8 percent annual growth, and finally to $13.409 billion in 1990, a 10.34 percent annual growth rate. To reach this figure in 1990, a growth rate of 9.14 percent is projected. Historically, local support of schools accounted for 50 percent of total revenue for public schools. In 1964 local support represented 52.5 percent of total revenue for public elementary and secondary schools reaching a low of 43 percent in 1969, raising slowly again to 48.22 percent in 1975. If the projected 9 percent growth rate actually materializes, incidentally a rate lower than its historic value, revenue from real property taxes will amount to 48.6 percent of total revenue in 1976, 50.4 percent in 1980, 51.5 percent in 1985, and nearly 53 percent in 1990.

Real property taxes can be expressed in terms of per pupil enrolled. In 1964, $408 per pupil was realized from real property taxes, increasing to $1,063 in 1975, reflecting an average growth rate of 9.09 percent. Real property taxes for public schools are projected to increase from $1,063 per pupil in 1975 to $1,791 in 1980, to $2,886 in 1985, and to $4,755 by 1990. This represents growth rates of 10.99 percent in the period 1975-1980, 10 percent from 1980-1985, and 10.5 percent in the last period of 1985-1990. This accounts for a compound annual growth rate of 10.5 percent for the period 1975-1990.

Projected Property Full Valuation - New York State

Full valuation on property was $89.037 billion in 1964. It increased to $179.433 billion in 1975, reflecting a growth for this period of 6.57 percent. The rate of growth for the last five years has been greater, an 8.29 percent annual increase.

Over the future years full valuation on property will tend to grow more closely in line with its long term growth rate. Thus, property full valuations will increase from $179.43 billion in 1975, to $249.69 billion in 1980, to $347.40 billion in 1985, and finally to $483.39 billion in 1990. This will result in an overall growth rate of 6.83 percent.

Local school districts will probably have to tax themselves more heavily, in the future if they are to maintain schools at their present level of services, considering decreasing percentages of State Aid. In 1964, property tax rates were $13.99 per thousand on average for the state of New York. In 1975, the aver-

age state tax rate for schools was $20.16. This is a 3.37 percent average increase per year in the property tax rate. According to the projections of our base line data, tax rates will increase to $27.68 in 1990. This will result in a yearly tax rate increase of 2.14 percent. The increase from 1975 to 1980 is projected to $22.55 per thousand and to $25.39 per thousand in 1985.

Projected Total Aid and Projected Budget Outlook for New York Public Schools (K-12)

Local, state, and federal revenues for public schools in New York State totalled $2.373 billion in 1964, increasing to $7.501 billion in 1975 for a compound annual growth rate of 11.03 percent. From 1970 to 1975, total revenue decreased to 9.41 percent annually.

Total revenue is projected to increase from $7.501 billion in 1975, to $11.157 billion in 1980, to $15.930 billion in 1985, and to $25.410 billion in 1990. This reflects growth rates of 8.26 percent, 7.38 percent, and 9.79 percent for each respective five year period. Overall, this is an 8.47 percent annual growth rate, much lower than its historic growth of 11.40 percent.

In per pupil dollars, total revenue per pupil was $778 in 1964, increasing to $2,205 in 1975, a 9.94 percent growth rate. Total revenue per pupil for public schools is projected to increase to $3,524 in 1980, to $5,573 in 1985, and to $8.813 in 1990. This represents a compound annual growth of 9.6 percent, slightly lower than its long term historic growth rate. Although pupil population will decrease somewhat during the decades to come, increased pressures

from teachers and from the populace for maintaining educational services will keep the rate of expenditure increase for education consistent with long term growth rates.

Figure 6.4 shows the actual surpluses and deficits as well as the project ed surpluses and deficits for expenditures and total revenue for New York public schools (k-12). As this picture portrays, from 1964 to 1968 total revenue exceeded expenditures by varying amounts. In 1968, expenditures exceeded revenue by $.001 billion, by $.066 billion in 1970, and by $.099 billion in 1972. In 1975, there was a deficit of $.079 billion. Over the next three years, expenditures are projected to exceed revenue by decreasing amounts until 1979-1980. Not until around 1983 will revenue surpluses offset expenditure deficits of previous years. Fortunately, this will occur just about the time that elementary pupil enrollments are projected to increase. Funds should become available, then, to offset increased enrollments and to provide for some increases in the levels and quality of educational services for the public schools of New York State.

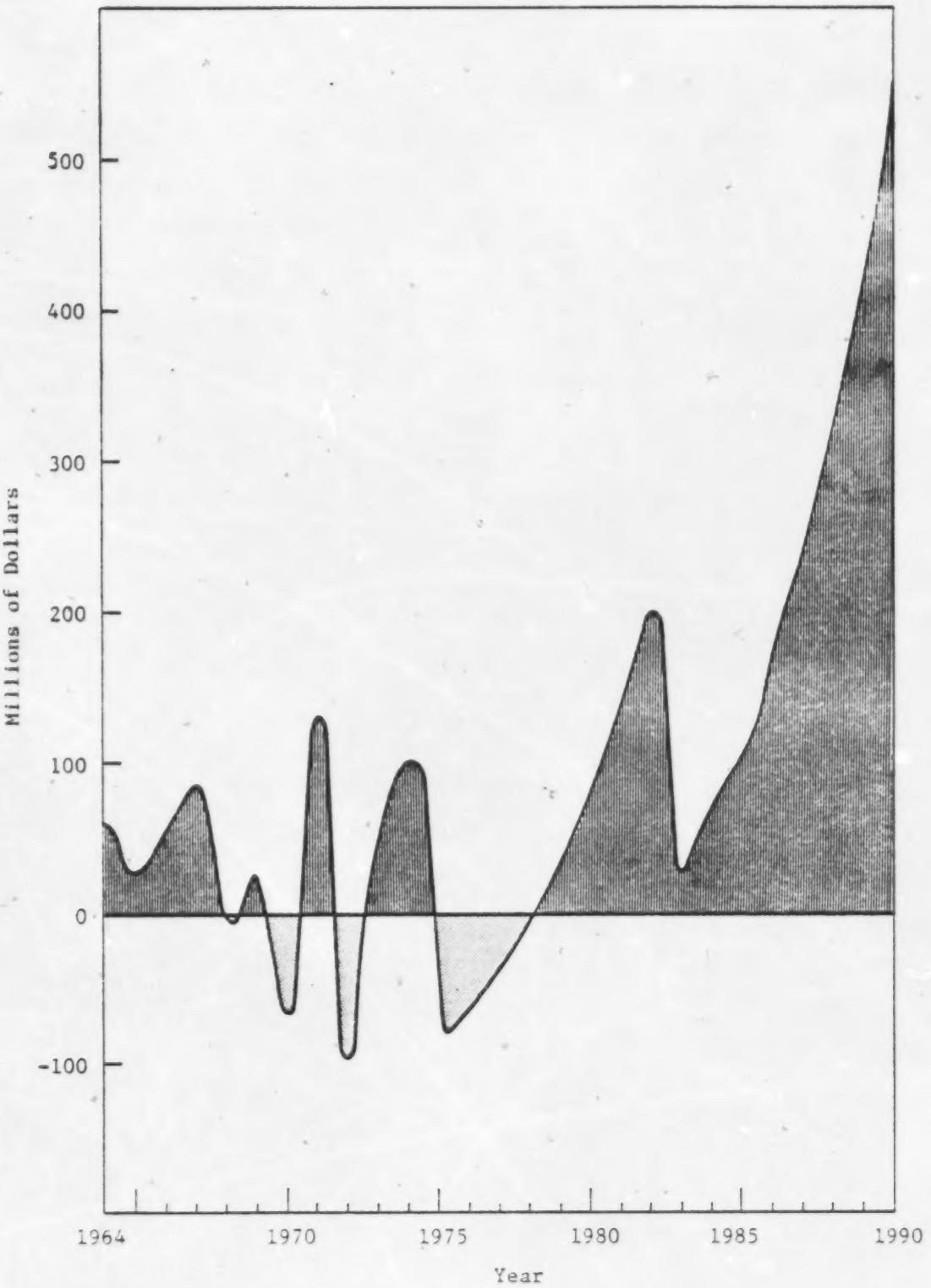

Figure 6.4 New York State Public Elementary and Secondary Schools (K-12) Actual and Projected Surplus and Deficit, 1964-1990. Based on Total Aid and Total Expenditures (Less Borrowing).

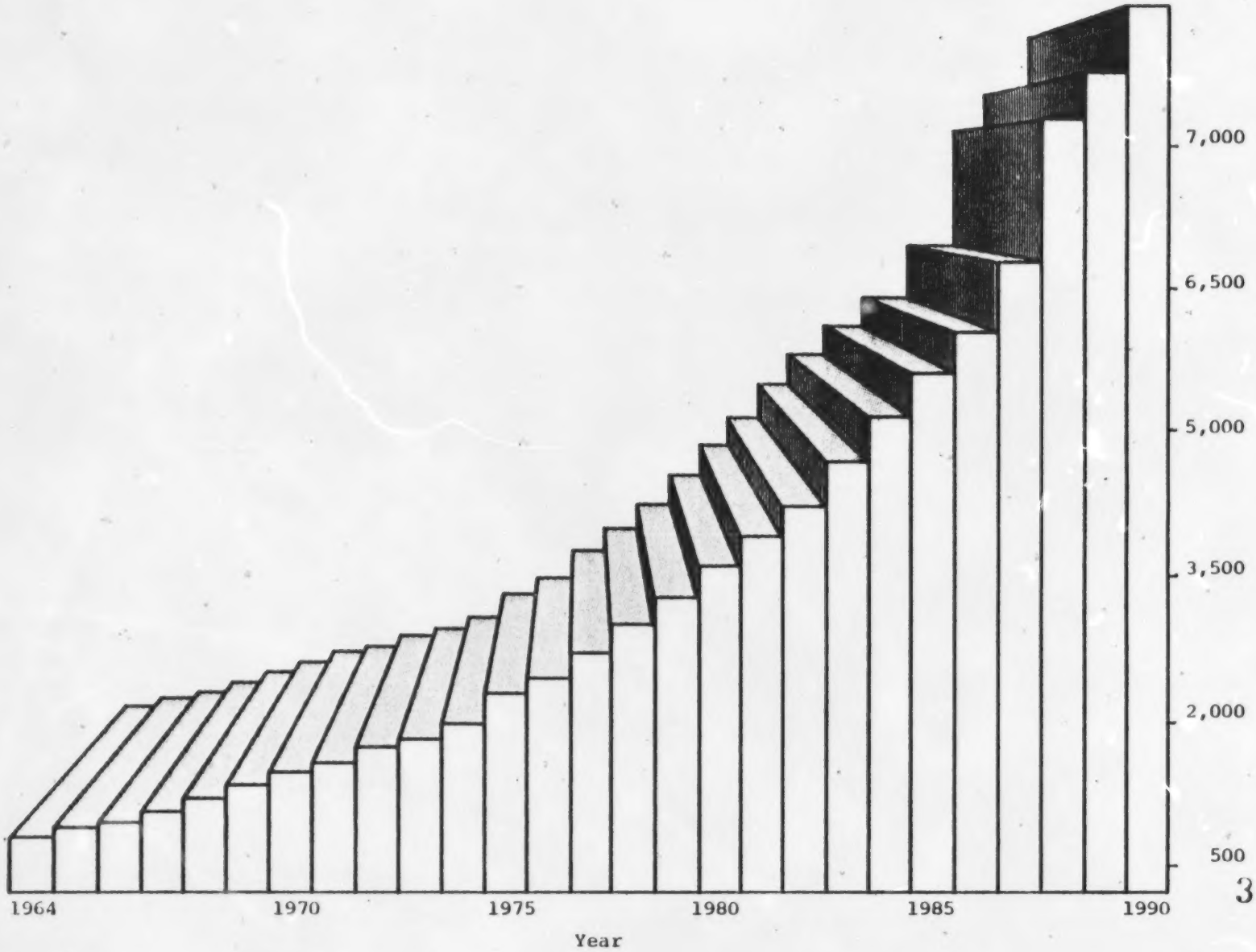

Figure 6.5. Total New York State Public School District Expenditures, Actual and Projected, Per Pupil Enrolled, 1964-199

BIBLIOGRAPHY

Note: BIBLIOGRAPHY IS IN PREPARATION FOR FINAL REVISION.

TABLE

NEW YORK STATE SCHOOL DISTRICT FINANCES
PUBLIC ELEMENTARY AND SECONDARY SCHOOLS (K-12)
INCLUDING NEW YORK CITY IN CONSTANT DOLLARS
1967 = 1.000

(In Billions)

YEAR (1)	FALL ENROLLMENT (2)	FULL VALUATION (3)	REAL PROPERTY TAXES (4)	STATE AID (5)	FEDERAL AID AND ALL OTHERS (6)	TOTAL AID (7)	TOTAL EXPENDITURES (Less Borrowings) (8)
1964	3,051,006	95.8	1.3	1.1	0.1	2.6	2.5
1965	3,121,717	98.2	1.5	1.2	0.2	2.8	2.8
1966	3,176,574	100.8	1.4	1.4	0.3	3.1	3.0
1967	3,248,879	100.7	1.6	1.5	0.4	3.4	3.4
1968	3,325,477	99.2	1.7	1.6	0.4	3.6	3.6
1969	3,397,413	103.8	1.7	1.9	0.4	4.0	3.9
1970	3,422,809	103.6	1.9	1.8	0.4	4.1	4.2
1971	3,489,245	108.6	2.1	2.0	0.5	4.5	4.4
1972	3,503,859	112.9	2.2	1.9	0.5	4.7	4.8
1973	3,474,392	119.5	2.3	1.9	0.5	4.7	4.7
1974	3,427,560	116.7	2.3	1.8	0.5	4.6	4.5
1975	3,401,636	111.2	2.4	1.8	0.6	4.7	4.7

TABLE

NEW YORK STATE SCHOOL DISTRICT FINANCES
PER PUPIL PUBLIC ELEMENTARY AND SECONDARY SCHOOLS (K-12)
INCLUDING NEW YORK CITY IN CONSTANT DOLLARS
1967 = 1.000

(In Billions)

YEAR (1)	FALL ENROLLMENT (2)	FULL VALUATION (3)	REAL PROPERTY TAXES (4)	STATE AID (5)	FEDERAL AID AND ALL OTHERS (6)	TOTAL AID (7)	TOTAL EXPENDITURES (Less Borrowings) (8)
1964	3,051,006	31,400.7	439.4	358.7	38.8	836.9	815.4
1965	3,121,717	31,452.4	469.7	368.4	62.4	900.5	891.0
1966	3,176,574	31,721.6	449.3	433.4	88.8	971.5	953.0
1967	3,248,879	31,003.9	485.1	455.5	116.3	1057.0	1031.1
1968	3,325,477	29,825.6	500.9	468.2	114.9	1084.0	1084.3
1969	3,397,413	30,540.9	502.8	546.7	116.1	1165.6	1153.6
1970	3,422,809	30,095.9	543.1	530.3	121.7	1195.0	1211.5
1971	3,489,245	31,120.6	601.2	559.2	133.7	1294.1	1263.4
1972	3,503,859	32,225.3	629.6	553.9	153.7	1337.2	1359.8
1973	3,474,392	34,402.4	664.9	536.6	148.0	1349.5	1337.8
1974	3,427,560	34,058.0	676.7	513.0	153.5	1343.3	1323.6
1975	3,401,636	32,704.4	659.3	537.3	170.6	1367.2	1381.6